

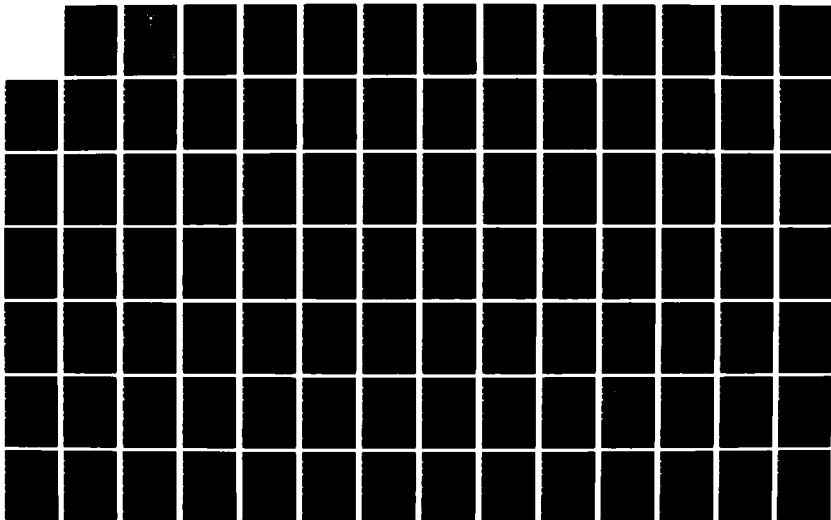
AD-A186 539

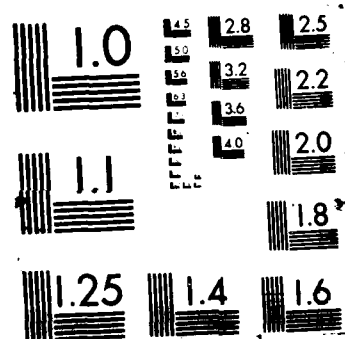
THE REACTIONS AND ATTITUDES DISPLAYED BY AIR FORCE
OFFICERS TO THE COMBAT (U) AIR FORCE INST OF TECH
WRIGHT-PATTERSON AFB OH SCHOOL OF SYST L K SMARIGA
SEP 87 AFIT/GLM/LSG/87S-69 F/G 5/8

1/2

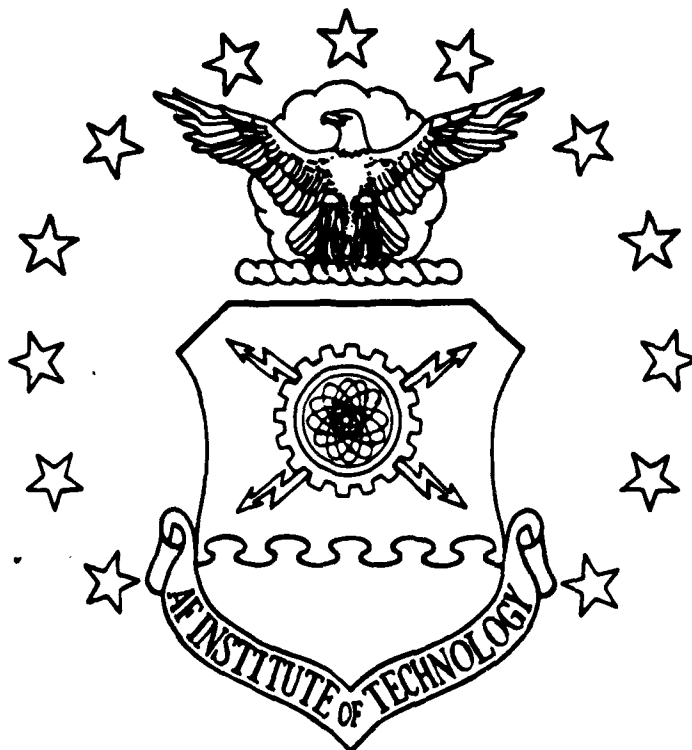
UNCLASSIFIED

NL





AD-A186 539



THE REACTIONS AND ATTITUDES
DISPLAYED BY AIR FORCE OFFICERS
TO THE COMBAT SUPPORT DOCTRINE

THESIS

Linda K. Smariga
Captain, USAF

AFIT/GLM/LSG/87S-69

DTIC
ELECTE
DEC 03 1987
S & E D

DEPARTMENT OF THE AIR FORCE
AIR UNIVERSITY

AIR FORCE INSTITUTE OF TECHNOLOGY

Wright-Patterson Air Force Base, Ohio

This document has been approved
for public release and sale; its
distribution is unlimited.

87 11 11 11 11 11

AFIT/GLM/LSG/87S-69

THE REACTIONS AND ATTITUDES
DISPLAYED BY AIR FORCE OFFICERS
TO THE COMBAT SUPPORT DOCTRINE

THESIS

Linda K. Smariga
Captain, USAF

AFIT/GLM/LSG/87S-69

α

Approved for public release; distribution unlimited

AFIT/GLM/LSG/87S-69

THE REACTIONS AND ATTITUDES DISPLAYED
BY AIR FORCE OFFICERS
TO THE COMBAT SUPPORT DOCTRINE

THESIS

Presented to the Faculty of the
School of Systems and Logistics
of the Air Force Institute of Technology
Air University
In Partial Fulfillment of the
Requirements for the Degree of
Master of Science in Logistics Management

Linda K. Smariga, B.A.
Captain, USAF

September 1987

Approved for public release; distribution unlimited

Preface

The purpose of this study was to determine how well officers understand AFM 2-15, the Combat Support Doctrine, and to determine their reactions toward it. This manual has been redesignated as AFM 1-10 since the beginning of this research study. The research information is to provide senior Air Force officers with feedback, as AFM 1-10 is the foundation for operational and tactical doctrine about combat support.

I received an abundance of help from others during this endeavor. I am indebted to my thesis advisor, Lt Col Frederick W. Westfall, for his insightful ideas and continued support. I wish to thank Lt Col William T. McDaniel for his encouragement in this project, and for his assistance in times of need. And last but certainly not least, I express my deep appreciation to my husband, Capt Russ Smariga, for his cooperation and patience this year as we learned how two AFIT students survive, together.

Table of Contents

	Page
Preface	ii
List of Tables	v
Abstract	viii
I. Introduction	1
General Issue	1
Specific Problem	4
Purpose of Study	4
Research Questions	5
Scope	5
Summary	6
II. Literature Review	7
Doctrine	7
Logistics Doctrine	8
Doctrine Education	15
Summary	21
III. Methodology	22
Introduction	22
Justification of Survey Approach	22
Survey Instrument	23
Sample/Population	24
Survey Administration	26
Data Measurement	27
Statistical Analysis	29
Summary	31
IV. Findings and Analysis	33
Introduction	33
General Information	33
Research Question One	39
Research Question Two	45
Research Question Three	49
Research Question Four	53
Research Question Five	54
Other Findings	57
Summary	58

	Page
V. Conclusions and Recommendations	59
Introduction	59
Conclusions	59
Recommendations	64
Summary	66
Appendix A: Survey Instrument	68
Appendix B: Selected Comments from Survey Respondents	75
Appendix C: SAS Computer Program	79
Appendix D: Results for Research Question Four	84
Bibliography	97
Vita	99

List of Tables

Table	Page
1. Relationship Between Research and Survey Questions	24
2. Sex of Respondents	34
3. Age of Respondents	35
4. Source of Commission	35
5. Prior Enlisted Experience	36
6. Rank of Respondents	36
7. Years of Commissioned Service	37
8. Aeronautical Rating	37
9. Present AFSC	38
10. Career Summary	39
11. Respondents With a Secondary AFSC	39
12. Relationship Between Research and Survey Questions	40
13. Seen AFM 2-15 Prior to Survey	41
14. AFM 2-15 is Easy to Understand	41
15. Title Captures the Essence of Logistical Functions	42
16. AFM 2-15 Explains Processes	43
17. Career Background Helps Me Understand AFM 2-15	43
18. AFM 2-15 Helps Me Understand Relationship Between My Job and Other Functions	44
19. AFM 2-15 Scores	44
20. AFM 2-15 is Too Short	45
21. AFM 2-15 is Too Long	46

	Page
22. AFM 2-15 is Ambiguous	46
23. AFM 2-15 is Wordy	47
24. AFM 2-15 is Clear and Concise	47
25. Doctrine Helps Clarify My Role and Mission	48
26. All in AF Should Read AFM 2-15	49
27. Table of Score By See Summary	50
28. Opinion of Adding Briefing	51
29. Opinion of Adding Video	51
30. Opinion of Adding Written Material	52
31. Group Scores	52
32. Other AF Doctrines Read	55
33. Definition of Doctrine	56
34. Self-Study of History	56
35. Doctrine is Important for Understanding Combat	57
36. Any Actual Wartime Experience	58
37. Any Simulated Combat Experience	58
38. Everyone By PME Summary	84
39. Table of Everyone By Edtype	85
40. Table of Everyone By AFDOC	86
41. Table of Everyone By Define	86
42. Table of Everyone By History	87
43. Table of Everyone By Degree	87
44. Table of Everyone By Sex	88
45. Table of Everyone By Age	88
46. Table of Everyone By Commission	89

	Page
47. Table of Everyone By Rank	89
48. Table of Everyone By Prior	90
49. Table of Everyone By Aero	91
50. Table of Everyone By Years	92
51. Table of Carsum By Everyone	93
52. Table of Everyone By Command	94
53. Table of Everyone By Job	95
54. Table of Everyone By AFIT	96

Abstract

The purpose of this study was to determine a group of officers' reactions and attitudes towards AFM 2-15, the Combat Support Doctrine. Specifically, the study attempted to find if (1) The Combat Support Doctrine was understandable and meaningful to these officers; and to determine (2) If the doctrine was not understandable and meaningful to these same officers, was the problem the actual doctrine itself, or was the problem related more to the institution; the Air Force. That is, was the problem related more to the fact that the Air Force does not emphasize the study of doctrine.

The data was collected by a survey developed for this study. The research found that the Combat Support Doctrine was understandable to these officers, but that it was not equally as meaningful to these same officers. There was no conclusive evidence that the doctrine itself was at fault, but the research did show that the Air Force does not emphasize the study of doctrine on a regular basis. Doctrine is only presented, usually in a brief format, at commissioning sources, and more in depth at professional military education schools, in residence.

THE REACTIONS AND ATTITUDES DISPLAYED
BY AIR FORCE OFFICERS
TO THE COMBAT SUPPORT DOCTRINE

I. Introduction

General Issue

The Air Force has emphasized technology since its inception, and has always sought to obtain high quality hardware. Consequently, it has had a distinguished combat history. But if the Air Force is fortunate enough to have superior arms, that is not enough to guarantee victory (16:9). In today's world of deadly, mobile conventional forces and nuclear deterrence, the preparation for battle, instead of the actual combat, may prove to be more decisive in determining the outcomes of most battles (20:1). As the primary industry in the U.S. has shifted from manufacturing to services, the necessary period to acquire weapon systems has increased tremendously, along with industry's incapacity to surge production and mobilize for war. Consequently, "the next war will be a 'come as you are' encounter" (20:5). This makes it essential for officers to understand and know war. Major Earl H. Tilford, editor of Air University Review, says that "At the heart of the military profession is the art of war" (26:14). The U.S. Air Force must be prepared for war by studying and knowing the art of war

better than our enemy. This should take top priority - before the study of technology, engineering, the budget system, the Officer Effectiveness Report (OER) system, or the assignment system (26:14-15).

An understanding of war usually develops through experience and study. Most of today's USAF junior officers do not have actual combat experience, and must learn war through history, the experiences of others. "To thoroughly understand war, one has to first understand history" (26:15). Lt Colonel Ehrhart says that the study of history makes us more aware of our profession; we become attuned to current events, and realize how they affect our capabilities in war. "It broadens our perspective, putting questions of 'why', 'how', and 'if it were I...'" (9:105). Our past history has determined all that we are today, and an understanding of it will help determine our future (26:14).

Doctrine is based upon history, or the past experiences of many combatants. It is a generalization that comes from a common pattern, inferred from numerous, repeated experiences. It is officially taught - an approved teaching authorized by designated staff officials. It is meant to establish procedures, rules, or precepts, for optimum performance (15:91-92). Dr. Williamson Murray, a USAFR major, believes that "Doctrine must give commanders and subordinates on the battlefields a set of shared assumptions that enable them to know intuitively what others might be doing under the confused pressures of combat" (25:84).

While it depends on fundamental beliefs, formed from past experiences, a good doctrine is dynamic, never etched in stone (11:41-42). New doctrine is needed to keep up with either new technology (past experiences no longer offer a guide) or for areas not yet touched by doctrine (16:9).

The Air Force published a new doctrine in December 1985. It is Air Force Manual 2-15, Combat Support Doctrine, established for the combat support of aerospace forces. Combat support is defined as "the art and science of creating and sustaining combat capability" (22:12). This new doctrine was written at a broad level, and will be the basis for more specific, lower-level doctrines. In April 1987, it was redesignated as Air Force Manual 1-10 (23), reprinted, and released as AFM 1-10 in June 1987.

Air Force Manual 2-15 was mainly intended for commanders, to relate the role of combat support forces to combat operational forces (22:10). Lt Colonel Frishkorn feels that doctrine must not be understood by senior officers alone. To be successful, doctrine must be institutionalized - taught and understood throughout the Air Force (11:41). The Combat Support Doctrine has not yet been widely distributed throughout the Air Force. Consequently, it has been examined, studied, and critiqued by relatively few officers. A general issue of concern is "How readable, understandable, and meaningful is the Combat Support Doctrine to today's officers?".

Specific Problem

The Combat Support Doctrine is intended to be the foundation for more detailed operational and tactical doctrine. Therefore, it is important to give feedback from the operating echelon to the composers of the doctrine. The specific question to be researched is "Is the Combat Support Doctrine understandable and meaningful to today's officer, or are additional materials, either verbal, visual, or written or all of these, necessary for an officer to understand the doctrine?"

Purpose of Study

The research study primarily tried to determine if the Combat Support Doctrine requires additional materials to make it understandable. If research substantiates the alternative question that the doctrine does require additional material to clarify it, then such research leads to a two-fold purpose. If AFM 2-15 is not easily understood, the first purpose is to understand why the doctrine is not clearly understood. Is the doctrine itself at fault, or is the problem related to the fact that the Air Force does not emphasize the general study of doctrine? The second purpose is to recommend a specific package, to accompany the Combat Support Doctrine as it is distributed throughout the Air Force.

Research Questions

To answer the specific research problem, and to fulfill the purposes of the study, the following research questions must be answered:

1. Is the Combat Support Doctrine, AFM 2-15, understandable by today's USAF officers?
2. Is the Combat Support Doctrine meaningful to these same officers?
3. Does the manual need additional materials to make it understandable and meaningful?
4. If the manual is not understandable and meaningful, is the doctrine at fault?
5. How much does the Air Force emphasize the study of doctrine?

Scope

Doctrine should be studied long before an officer attains a command position. Thus it should not only be understandable to commanders, but also to junior ranking officers. This research was limited to studying the perceptions, reactions, and attitudes of USAF officers, first lieutenant through major, to the Combat Support Doctrine. The study was further limited to the officer population of Wright-Patterson AFB, OH. Throughout this study, the particular group of Wright-Patterson AFB officers are identified as the "test group."

Data was also gathered on how much emphasis is placed by the Air Force on the study of doctrine. This was limited to initial commissioning sources, the Professional Military Education (PME) institutions, and Project Warrior programs.

Summary

To successfully defend our country, the U.S. Air Force requires more than state of the art weapon systems. The Air Force must also insure that its members understand war and know how to conduct warfare. An excellent method is to use doctrine - the official teaching of how to best conduct military operations. Lt Colonel McDaniel believes that:

The study of doctrine remains the best means of mentally preparing the Air Force for war ...if doctrine can distill the experience of history and be effectively presented to Air Force members, the Air Force may come to better understand itself and begin to focus on understanding its enemies. (22:14)

The Air Force has published a new Combat Support Doctrine, AFM 2-15. This doctrine was written to communicate the vital mission of the USAF combat support forces.

This research study determined how understandable the Combat Support Doctrine was to the test group, and also determined how factors, such as additional materials and general knowledge of doctrine, affected the perceptions and opinions of the test group.

The study includes a historical literature review, a methodology chapter, a results and analysis chapter, and a final chapter of conclusions and recommendations.

II. Literature Review

This review will give a historical background of general doctrine, and more specifically, logistics doctrine. It will also explore how much emphasis is placed on the study of doctrine by the Air Force.

Doctrine

According to Luvaas, the word "doctrine" for military usage only began in the 1950s. But the concept of doctrine goes back to the Roman centurions, with "prescribed training techniques and organization as well as a tactical recipe" (17:56). Luvaas emphasized that smaller armies used training manuals, and that "doctrine" came about with larger armies. Frederick the Great, leading the Prussians and Austrians, called doctrine the order of teaching, with true theory based upon experience and historical study. Throughout history, many military leaders have studied doctrine, most often informally - Napoleon, Marshal Marmont, Baron Jomini, and Lieutenant Halleck of the United States (17:56-58).

But as armies evolved through time, the longer range of new firearms called for new tactics and teachings. The turn of the century brought out a focus of offensive doctrine by the Germans, French, Russian, and Austrian-Hungarian armies. British and American armies borrowed these new ideas for themselves (17:58-59). "After 1918, military doctrine

everywhere became increasingly nationalized" (17:59). Not only tactics, but also national security became important in doctrine. Since World War II, armies have updated their teachings with nuclear theatres, technology's growth, and "the polarization of international politics" (17:59). Luvaas states that these conditions may give cause for having more than one doctrine, to suit the different theatres of war (17:59-60).

Logistics Doctrine

Not only are there different theatres of war, but there are different operations within the army, or in this case, the air force. In the U.S. Air Force, aerospace doctrine is written on the three levels: basic (1-series manuals), operational (2-series manuals), and tactical (3-series manuals) (22:10). Basic doctrine is further broken down, beginning with AFM 1-1, Basic Aerospace Doctrine of the United States Air Force, and includes doctrine for either new or different operations, such as AFM 1-6, Space Doctrine.

There has been a long struggle throughout the history of the Air Force for a basic logistics doctrine. Lt Colonel Gary McMahon reported that in 1946, soon after the formation of the Air Force, Air University was given responsibility to develop basic Air Force doctrines. In 1947 Air University planned to write not only doctrine for the employment of air power, but also doctrine for administration, logistics,

communications, intelligence, and other related fields. However, in 1948, the Air Force gave the responsibility of doctrine formulation to the Air Staff. This change caused much confusion, and consequently, it was 1953 before the first basic Air Force doctrine for aerospace power was published. The difficulties encountered in publishing just this one basic doctrine prevented the formulation of a logistics doctrine (24:2-3).

McMahon further states that there were a few other "logistics doctrine" manuals published in the 1940s and 1950s by the Army Air Corps, the Air Force, and the Air Material Command. But these manuals contained few doctrinal type statements, and consisted mostly of logistical planning tables or short histories of policies and support procedures (24:3-4).

In 1955, the Advanced Logistics Course was established at the Air Force Institute of Technology (AFIT), "to train logisticians and develop logistics philosophy and doctrine" (24:4). McMahon says that eventually, two students published AFM 400-2, Air Force Logistics Doctrine, in 1968 (24:4).

Air Force Manual 400-2 remained as the only logistics doctrine for many years. Major James D. Gorby published an article in early 1980 to "stimulate the development of a new logistics doctrine for the Air Force (12:24). He discussed four reasons to have a new doctrine. Commanders and logisticians needed "an enduring set of rules (to) use when considering how to best accomplish a mission" (12:24). A new

doctrine was needed for long range logistics planning, guided by lessons already learned. A new, updated doctrine was needed to focus on the future, on how to best support combat forces. The fourth reason was to form an intellectual foundation to base future studies of logistics (12:24).

Gorby then proposed nine principles as the basis for revising the current AFM 400-2. These nine principles were 1) Objective - support the mission, 2) Readiness - keep the equipment ready for war, 3) Sustainability - support the mission until it is completed, 4) Flexibility - support under all planned conditions, 5) System Integrity - logistics is a dynamic, interrelated, total system, 6) Visibility - watch those things most critical to the mission, 7) Economy - do the job the cheapest way possible, 8) Availability - the right thing to the right place at the right time, and 9) Simplicity - logistics systems and procedures should be easy to understand and operate (12:25-29).

A revised logistics doctrine was scheduled for publication in June 1980, by the AFIT School of Systems and Logistics, but it was not published (12:24, 13:10, 15:4). Lieutenant Colonel Richard V. Badalamente was largely responsible for trying to publish a new doctrine, and published a synopsis of the proposed draft in spring 1981. His proposed draft had several differences from the old AFM 400-2. He defined logistics as "a process that gives resources utility, causing them to be the right thing, in

the right place, 'at the right time" (2:32). Instead of a document like AFM 400-2 to establish logistics principles and concepts, his proposal consisted of a set of fundamental beliefs.

The first belief was a conceptualization of logistics. Badalamente said that four subsystems are linked together in the logistics system. These are requirements determination, acquisition, distribution, and maintenance. The next belief stated that goals were necessary for structuring the logistics system. These goals said to be adaptable, flexible, responsive, survivable, economical, and simple (2:32-33). Note the similarity between these goals and Gorby's principles.

Badalamente then proposed fifteen "principles" of logistics. These principles are 1) strategy-tactics-logistics, 2) joint centralized planning, 3) objectional priorities, 4) design to life cycle cost, 5) simplicity, 6) standardization, 7) flexibility, 8) continuous flow, 9) mobility, 10) survivability, 11) economies of scale, 12) response, 13) information, 14) communication, and 15) sustainability. Badalamente emphasized that these principles are interdependent, with tradeoffs to be considered and resolved when making logistical decisions (2:32-35).

Lt Colonel William T. McDaniel believes that Badalamente's proposed draft for a new logistics doctrine never materialized as a published doctrine because of his

location at AFIT. McDaniel states that the Air Staff, because of its access to Air Force policymakers, "offered the best, if not the only, opportunity to successfully advocate and publish Air Force doctrine both then and now" (22:10). Beginning in 1980, the Air Staff tried several times, unsuccessfully, to publish a new logistics doctrine.

The efforts that culminated into the Combat Support Doctrine began in 1984, at the CROSS TALK conference, a major command logistics planner's conference. The research for a new doctrine began after this conference, where the Director of Logistics Plans and Programs, HQ USAF, announced plans to publish a logistics doctrine as soon as possible (22:10).

The first job was to define logistics. After much research, the "principle of logistics" in AFM 1-1 was modified to read "logistics is the art and science of preparing men and machine for combat by obtaining, moving, and maintaining war-fighting capability" (22:10).

The initial draft of the doctrine centered around three elements: process, principles, and missions. Unlike previous doctrines, the logistical activities were described in a circular, life-cycle fashion. One process, requirements or combat needs, drove four subprocesses: acquisition, distribution, restoration (this term was felt to more compatible with man and machines), and disposition. All of these processes described "what logistics was, not how it is done" (22:11). Later, in subsequent drafts, these

four subprocesses were expanded to eight; adding definition, maturation, integration, and preservation (22:12).

The second element of the draft doctrine was principles. These were to be objective principles, telling what to do. Subsequent, lower-level manuals would tell how to do it. Seven principles were identified: goals, balance, leadership, control, effectiveness, flexibility, and synergy (22:11). Further refinement later changed two names and added one more principle; goals was changed to objective, synergy was changed to synchronization, and trauma/friction was added. This last principle was intended to dispel the notion that the Air Force operates the same in peacetime as it does in war (22:11,13).

The doctrine's third element, missions, were support missions and specialized support tasks written to establish objectives for the logistics process (22:11). At the April 1985 conference, the missions element was dropped from the doctrine. The conferees felt that the support missions were redundant, and could be included with the combat support processes (22:13).

One more step was taken during the first draft. The word "logistics" was replaced with the term "combat operations support". This term was to convey that all support activities are related to operations (22:11).

The April 1985 conference had representatives from every Air Force key agency and every major command except Space Command. This conference accomplished several things,

intending to finalize the draft. First, a title for the doctrine was chosen. "Logistics" was agreed to be dropped, but the word "operations" was deleted from the term "combat operations support," and the title "Combat Support" was chosen. Next, the architecture of the doctrine was studied. Four more processes were added, and the conferees searched for a new definition of combat support. The group agreed to use Admiral Henry E. Eccles' definition of logistics, "the art and science of creating and sustaining combat capability" (22:12).

After the conference, an ad hoc group at Air Staff produced a final draft of the manual. This included writing a new first chapter to introduce combat support, and adding the principle trauma/friction (22:13).

The final published manual consisted of three chapters. The first chapter introduced the doctrine, and gave it a combat perspective. The second chapter described the combat support processes. The last chapter discussed each of the nine combat support principles. The Combat Support Doctrine was published in December 1985, and several steps have been taken to institutionalize it (21:37). A permanent position was established at the Air University Center for Aerospace Doctrine, Research, and Education (CADRE). The officer in this position encourages "the formulation and instruction of logistics doctrine within Air University, Air Training Command, and AFIT" (21:37). By the summer of 1986, AFM 2-15 was being taught at the Senior Officer Employment Course,

Air War College Associate Program, and the Transportation Staff Officer Course (21:37). AFM 2-15 was introduced to the School of Systems and Logistics, AFIT, in fall 1986. By early 1987 it was also taught at the Senior NCO Academy, Air War College, and Air Command and Staff College (7).

Doctrine Education

Background. Technology is undoubtedly important in war. But General Marquez states that we should "learn to think better, not bigger" (18:10). Defense critic Jeffery Record believes that the U.S. military does not teach that success in war is primarily decided by human intangibles (such as leadership) rather than by quantifiable numbers and equipment. He views the military as a sea of bureaucracy and careerism, with the American officer having a "singular lack of interest in the art of war" (18:10).

The Air Force, unlike its sister services, has never emphasized doctrine very heavily. "Historically, doctrine has not played a major role in the Air Force since World War II with regard to planning, programming, organizing, equipping, training, or sustaining aerospace forces" (22:14). But doctrine is needed in the preparation for war, to give service members a broader perspective. Dr. I.B. Holley says that doctrine allows every individual (in the Air Force), whether officer or airman, to see his role in the larger context. This makes him "...better equipped and more inclined to exercise that initiative which

differentiates the true professional from the mere timeserver" (16:9).

Recent evidence suggests that the Air Force is slowly starting to institutionalize the study of doctrine, military history, and the art of war. Several factors have lead to this trend. Handy and McCool give a brief history of these events. The Air Force has experienced a lack of war-fighting ability for several reasons. There has been a sharp decline in the number of combat experienced members, and no major sustained combat operation in the last decade. The last major combat operation was the Vietnam conflict, and in the early 1970s the U.S. withdrew its combat forces. Since then, most of these experienced members have either retired or separated from the Air Force (14:10).

The public attitude following Vietnam focused on everything in the Air Force except combat. Rather than focusing on war-fighting capability, more emphasis was placed on domestic, economic, and social issues within the military. This public attitude changed following the failure to rescue the Iranian hostages, and our lack of intelligence information about Iran. The U.S. government wasn't prepared for the fall of the Shah, and consequently dealing with Ayatollah Khomeini. In the 1980s, the Falkland Islands, Afghanistan, Lebanon, and Central America have vividly reminded us of our war-fighting role. As a result, General Lew Allen, then Air Force Chief of Staff, began the Project Warrior program (14:10).

Logisticians, according to Handy and McCool, do not relate much to wartime actions and needs. They feel that this is due a combined lack of combat experience, and the degree to which technology has made the Air Force member feel like a "functional specialist" (14:12). McDaniel also says that the lack of interest in the art of war is due to an environment that fosters a peacetime, instead of war-fighting, intellectual character (20:7). Current combat exercises usually begin after deployment and end before sustainment becomes an operational constraint. Logisticians are not realistically tested, and commanders do not have an opportunity to fully appreciate the impact of logistics (or lack of logistics) on an operation (20:8). "...There is an ongoing need for logisticians to relate their activities to possible wartime scenarios and to maintain a combat mentality" (14:10). Training programs are needed now to develop the logisticians' sense of urgency, since in wartime their actions will affect those performing the traditional direct combat or front-line roles (14:12).

Commissioning Sources. The Air Force Academy, the Officer Training School, and an Air Force ROTC detachment were all researched for current teaching of doctrine. The three programs were similar.

Sophomores at the Academy have a half semester course titled Air Power Theory and Doctrine. AFM 1-1 is a core element; referred to throughout the course. Each student receives a copy of AFM 1-1. The course consists of twenty-

one "contact" hours, consisting of lectures and wargames. Students in their third year take Joint Deployment Concepts, which draws upon AFM 1-1, and also upon naval and army doctrine. This course emphasizes the air land battle, and consists of forty-two contact hours (19).

Students at Officer Training School do not receive a copy of AFM 1-1, but it is available and referred to frequently throughout the lessons. The lessons contain extracts of AFM 1-1. One lesson, that is only read by the students and not discussed in lecture, is titled USAF Basic Doctrine. The lesson defines doctrine, and briefly explains aerospace doctrine. It also discusses the three levels of Air Force doctrine, joint doctrine, and combined doctrine. National and military objectives are covered, and the theme continues with the Air Force functions, missions, and specialized tasks. Another lesson, like the Academy, teaches the air land battle doctrine and naval doctrine (3).

Air Force ROTC students take a four credit semester course their senior year named American Defense Policy. One goal of this course is for the students to "comprehend selected elements of U.S. military forces, doctrine, and employment capabilities" (1). Each student receives a copy of AFM 1-1 as one of their texts, and uses it as a reference during the course. One lesson is solely about AFM 1-1 (1).

Project Warrior. Project Warrior began in February 1982. This Air Force program has two objectives. The first one is to make the Air Force personnel understand that they

are warriors, and to improve their warfighting spirit. The second objective is to have "an improved understanding of the theory and practice of war" (10:15). Warrior was not intended as a quick fix, but as a long term ongoing process, aimed "at both the heart and brain of the warrior" (9:103).

The Warrior program has an Air Force focal point at USAF Headquarters, and successive focal points down to the wing and squadron levels (10:16). The program is informal, and varies from base to base. There are books in the base libraries, posters, computer wargaming clubs, lecture programs, writing contests, and orientation flights (10:16-18). It is a program with extreme flexibility, tailored for each unit to achieve the dual objectives. At some bases it has done very well, but has made little progress at other bases (9:103).

Professional Military Education (PME). The PME schools have increased their teaching of doctrine. The Squadron Officer School (SOS), lasting eight and a half weeks, gives each student a copy of AFM 1-1 to read while they are in residence, and tests them a small amount (eight percent of one test). A member of the Air Staff lectures for one hour on current issues affecting doctrine. The school likens broad strategy with doctrine, and spends five hours of seminar/lecture analyzing the Air Force's role in World War II, Korea, and the Vietnam conflict. SOS then reviews AFM 1-1 in a one hour seminar in preparation for a war game exercise. The exercise lasts approximately eight

hours, trying to apply the principles of AFM 1-1 to the scenario. In addition to teaching doctrine and studying strategy, each student researches a historical military figure, and prepares a briefing about the subject (7).

The Air Command and Staff College (ACSC) defines doctrine rather broadly - "what is believed and taught about the best way to conduct military affairs" (13). Using this definition, about one third to one half of the curriculum deals with the teaching of doctrine. Students study a historical analysis of Air Force doctrine, tracing the use and misuse of it, and observing lessons learned. This broad standard is taken down to the tactical doctrine level, and reviewed in past wars and conflict. ACSC also teaches how the Air Force doctrine relates to joint doctrine with the other services (13).

Although the PME schools are making great strides, only fifty percent of company grade officers attend SOS in residence, and correspondence students do not see a copy of AFM 1-1. ACSC teaches doctrine to a great extent, but the school is only available by either correspondence, seminar, or in residence, midway through an officer's career. The teaching of doctrine is probably much richer in residence than by seminar or correspondence.

Summary

The Combat Support Doctrine, AFM 2-15, has evolved after a long period of fragmentary logistics doctrine. This new doctrine teaches the basic lesson of how vital it is to have a fully prepared combat support force for successful military operations. Now that the manual is here, it is important to institutionalize the doctrine in the Air Force.

Doctrine education is evident throughout the Air Force, but it is not taught at great length or at a level of much depth. An officer entering the Air Force is acquainted with the idea of doctrine, and introduced to AFM 1-1. If the officer attends SOS in residence, the memory is refreshed. ACSC covers doctrine in greater detail, but that time period occurs after more than half of the average career is over. Project Warrior is a good program, but it tends to emphasize the 'heart' side of the program, "focusing on warfighting spirit and military perspective" (9:103).

Since the Combat Support Doctrine will be the foundation for more detailed, lower-level doctrine, it is important to see how understandable and readable AFM 2-15 is to today's Air Force officer. Chapter three describes the research method used to determine the reactions and attitudes of the test group to the Combat Support Doctrine.

III. Methodology

Introduction

The methodology and research design was structured to answer the research questions. The literature review has determined how much emphasis the Air Force places on the study of doctrine. To determine if the Combat Support Doctrine was understandable and meaningful with or without additional material, and to gather opinions about the doctrine itself, a survey was conducted. The survey was also used to gather data about each respondent's experience with doctrine education. This chapter discusses the justification for a survey, the survey instrument, the sample/population, survey administration, data measurements, and the statistical analysis.

Justification of Survey Approach

A mail survey instrument was chosen as the best method of gathering data to answer the research questions. No data currently exists regarding Air Force officers' opinions of the Combat Support Doctrine; therefore, data had to be created and analyzed to answer the specific research problem and to reach the purpose of the study. Using personal interviews as an option was discarded for several reasons. First of all, it was determined that the interviewees would be too intimidated to give complete answers about their comprehension of the doctrine. A mail survey had a greater chance to guaranteed anonymity, and remove any feelings of

intimidation. Secondly, it was important not to introduce any bias into the study, in order to have the officers' own opinion of the doctrine. A summarized version of the Combat Support Doctrine would have introduced the researcher's bias. A personal interview would not have permitted the time necessary to read the complete doctrine, thus necessitating a summarized version of the doctrine. A third reason to not use personal interviews was that there was not enough time to interview a large sample of officers, which was required to generalize any results.

Survey Instrument

A survey (Appendix A) was developed by the author to determine if the Combat Support Doctrine was understandable, and if not, to determine what additional materials needed to be added to make it understandable and meaningful, and to try to understand why any problems with the doctrine existed. The questionnaire, along with a copy of AFM 2-15, was sent to the selected sample members.

The survey was divided into three sections and contained 39 items. Respondents were instructed to first read AFM 2-15, which was provided in the survey package. The first section of the survey dealt with the officers' opinions and understanding of the manual, and whether they had seen it prior to the survey. A five point scale ranging from "Strongly Agree" to "Strongly Disagree" was used for items 2-18. All other items throughout the survey were yes/no

and multiple choice questions. The second section gathered data about the respondent's exposure to doctrine and their educational background. The third section gathered standard demographic data about their military background.

Table I shows the relationship between the research questions and the survey questions.

TABLE 1
Relationship Between Research and Survey Questions

<u>Research Question</u>	<u>Survey Questions to Answer It</u>
Is the Combat Support Doctrine understandable?	1, 2, 8, 9, 11, 12, 15-23
Is the Combat Support Doctrine meaningful?	3-8, 10, 12, 13
Does the Combat Support Doctrine need additional materials to make it understandable and meaningful?	1, 20, & the difference between group scores on 15-19
If not understandable and meaningful, is the doctrine itself at fault?	1-9, 11, 15-19, 21-39 (background)
How much does the Air Force emphasize the study of doctrine?	1, 21, 22, 23

Sample/Population

The population was limited to the officer population, first lieutenant through major, of Wright-Patterson AFB, OH. Due to the size of the population, a sample was taken instead of a census.

Sample Size. The sample size was calculated using the sample size formula recommended by HQ USAF/ACM's "Guide for the Development of the Attitude and Opinion Survey." This formula can be used when there is a known finite population. It provides a 95% \pm 5% confidence/reliability level. The formula was as follows:

$$n = \frac{N(z^2) * p(1-p)}{[(N-1) * (d^2)] + [(z^2) * p(1-p)]}$$

where: n = sample size
N = population size
p = maximum sample size factor (.5)
d = desired tolerance (.05)
z = factor of assurance for 95% confidence level (1.96) (6:12).

The population size was approximately 3,727 and the calculated sample size was rounded up to 349. A one hundred percent response rate was not expected, and it was desired to increase the size of the sample in order to achieve the 95% \pm 5% confidence interval. However, the number of surveys distributed was limited by another factor. AFM 2-15 had been changed to AFM 1-10 in April 1987, and AFM 2-15 was no longer being printed. AFM 1-10 was not due for release until late June. After several sources were checked, 399 copies of AFM 2-15 were obtained, thus determining the total number of surveys distributed. The analysis of the results was still expected to be valid, since the analysis was not intended to be generalized to the entire Air Force.

Sampling Plan. The Combat Support Doctrine and the survey was distributed to two groups within the sample (the

test group). Group A consisted of AFIT students who were enrolled in LOGM 567, Logistic Systems Overview during the Fall Quarter 1986. This group, having previously received additional material about doctrine, was then compared to Group B, who did not receive materials about doctrine in addition to AFM 2-15 and the survey. Group B was selected by a simple random selection method, utilizing the ATLAS Database. The Database randomly selected a group of officers using the following criteria:

1. Officers in the grades of O-2 through O-4.
2. Who are physically stationed at Wright-Patterson AFB.
3. Who hold any AFSC.
4. Whose last digit of SSN is a 1 or 9. (An arbitrary designation to ensure random selection)

The ATLAS Database provided 653 mailing labels. From this group, 337 names were randomly selected for Group B, and 62 AFIT students were selected for Group A, totaling 399 sample members.

Survey Administration

The survey was submitted to a panel of AFIT professors, revised, and pretested with a sample of the survey population to ensure internal validity of the instrument. They were asked to read AFM 2-15, complete the survey, and comment on its contents. The response was favorable, although several commented on how willing people would be about reading a fifteen page manual and answering a survey. The final survey was then forwarded to HQ AFMPC/DPMYOS. The

survey was reviewed and approved on 23 April 1987, and assigned USAF Survey Control Number 87-54, to expire on 1 August 1987.

The survey was distributed by 4 May 1987. Participants were asked to complete the survey and return it within ten working days after receipt. The closing date for receipt of completed surveys was 12 June 1987 so that data analysis could begin.

Data Measurement

One of the first considerations in analyzing data is the choice of using verbal or numerical description. Obviously, verbal descriptions of the data severely limit the meaning and sensitivity of the results, and prevent the use of any statistical techniques (8:42-45).

This study used numerical measurements to describe the data. The scales of measurement in this study were nominal, ordinal, and interval. Nominal scales are simply categorical, with each category being mutually exclusive (8:46). Examples of such categories are male or female; rated or not rated. Nominal scale responses were used for the demographic and background data in this research effort, and for three questions in the section dealing with the manual itself.

Ordinal scales add order to the nominal scale, and "consists of any set of numbers whose order corresponds to the order of items in terms of the characteristic being

measured" (8:47). One important point about ordinal scales is that even if consecutive numbers are used to describe the data, it does not mean that they have equal intervals. One of the most common examples of the ordinal scale is ranking, used in beauty contests, horse races, and in rating a list of movies from best to worst. The five point scale used on questions 2-18, from "Strongly Agree" to "Strongly Disagree" is considered an ordinal scale.

Interval scales have equal distances between the numbers on the scale, making the differences between them meaningful. The Fahrenheit temperature scale is the best example of this scale. Moreover, interval scales allow most arithmetic operations to be performed on the numbers (8:47). The only interval scale used in this survey was the "understand" score assigned to each respondent. There were five questions (items 15-19) which asked about the contents of AFM 2-15, to see how well the respondents understood the manual. Even though items 15-18 used the five point scale mentioned previously, a "no" was scored for using the choices "Strongly Disagree" and "Disagree," and a "yes" was scored for the choices of "Neither Agree or Disagree," "Agree," and "Strongly Agree." Item 19 was a multiple choice question. The respondents were graded for correct answers. The highest possible score was a five, corresponding to five correct answers.

Statistical Analysis

All of the statistical methods used for this research were accomplished by the use of Statistical Analysis System (SAS), a software system for data analysis. The SAS procedures were run on a Digital Equipment Corporation VAX 11/780 computer system at AFIT (the Classroom Support Computer). The SAS program used to analyze the data is provided in Appendix C.

Statistical Methods. A parametric test, the t-test, was chosen to analyze the significance between the understand scores for Group A and for Group B. These scores were measured on an interval scale, which Siegel says is one of the conditions necessary for parametric tests. He states that the other necessary conditions about the parameters of the population are: independent observations, normally distributed populations, and the same variance for both populations (27:19). The null hypothesis (H_0) and the alternate hypothesis (H_a) for the aforementioned t-test were as follows:

H_0 : There is no difference between the mean understand scores of Group A and Group B. This may also be stated as:

$$H_0: \mu_1 = \mu_2$$

H_a : The the mean understand scores of Group A will be greater than the mean understand scores of Group B. Or restated as:

$$H_a: \mu_1 > \mu_2$$

This test was conducted at the .05 significance level. The t-test was intended to partially answer Research Question 3, which asks "Does the manual need additional materials to make it understandable and meaningful?" Since Group A had received additional material (both written and lecture) about the Combat Support Doctrine, any statistical difference between the scores of the two Groups would show that the use of additional materials increases the understanding of the doctrine. Research Question 3 was also answered by question 1 and 20 on the survey.

All other research questions were analyzed with descriptive statistics and nonparametric tests. Siegel notes that "data measured by either nominal or ordinal scales should be analyzed by the nonparametric methods" (27:29). Nonparametric tests do not specify or assume the same certain population characteristics as do parametric tests (27:31).

Frequency counts were used as descriptive statistics. Frequency counts are the actual number of times each response is selected for an item. Frequency counts were used to describe the demographics of the sample, and determine the pattern of responses to items about the Combat Support Doctrine, and to items about doctrine education. These patterns were used to answer Research Questions 1, 2, 3, and 5. (See Table 1).

Two-way contingency tables (row x column) were also used to analyze the data. The Chi-square test for independence

was used when appropriate to determine the significance of the differences among the column groups; to determine whether or not there was a relationship between the row variable and the column variable. The X^2 test is appropriate for discrete categorical data, which is the type of data collected by the survey (27:174-176). The null and alternate hypotheses, by the definition of independence of events, for this test are as follows:

H_0 : An observation in row i is independent of that same observation in column j , for all i and j . Or also stated:

$$H_0: P_{ij} = P_i * P_j$$

H_a : The negation of the null hypothesis for some i, j .

$$H_a: P_{ij} \neq P_i * P_j \quad (5:135).$$

This test was conducted with a .05 significance level, and was used primarily to answer Research Question 4, which asks "If not understandable and meaningful, is the doctrine itself at fault?" A significant finding in any of the chi-square tests would help determine whether the respondents' opinions of the manual were related to the doctrine itself or more to their educational and career backgrounds.

Summary

A mail survey was used to collect data about officers' opinion and understanding of the Combat Support Doctrine. The sample was taken from officers, first lieutenant through major, at Wright-Patterson AFB.

The collected data was statistically analyzed, using the t-test, descriptive statistics, and the nonparametric χ^2 test for independence. The results are presented and discussed in Chapter Four.

iv. Findings and Analysis

Introduction

This chapter presents an analysis of the data collected from the survey. The analysis focused on assessing the officers' attitudes toward and opinions about the Combat Support Doctrine; and determining whether additional material was necessary to understand the manual. The analysis also examined how much the Air Force emphasizes the study of doctrine. This chapter is divided into seven sections. The first section gives general information about the data collection and the officers surveyed. The next five sections answer the research questions presented in Chapters I and III. The last section presents some additional findings.

General Information

Data Collection. A total of 182 surveys were received from the 399 mailed surveys, for a response rate of 46 percent. Group A respondents (AFIT LOGM 567 students) numbered 33, giving a 53 percent response rate. There were 149 Group B respondents (officers that were not AFIT students), with this group having a 44 percent response rate. The response rate was better than expected, due to consideration of the fact that each person surveyed was asked to not only answer a six page survey, but to also read a fifteen page manual. Although the surveys were sent to first lieutenants, captains, and majors, somehow a second

lieutenant completed the survey and sent it back. All of the surveys that were sent back were used for the analysis, although there were some missing data points where respondents had failed to answer questions.

Demographics. The first and second sections of the survey gathered information about the officers' opinions of the doctrine and about their educational background, respectively. The third section of the survey gathered the demographic characteristics of the respondents. These included sex, age, commissioning source, prior enlisted time, rank, years of commissioned service, aeronautical rating, primary Air Force Speciality Code (AFSC), and secondary AFSC. Tables 2-11 display this information in the form of frequency counts.

TABLE 2
Sex of Respondents

SEX	FREQUENCY	PERCENT	CUMULATIVE FREQUENCY	CUMULATIVE PERCENT
Female	20	11.0	20	11.0
Male	162	89.0	182	100.0

Table 2 shows that the sex ratio is fairly normal for the Air Force; women make up ten to eleven percent of the force. Tables 3, 4 and 5 demonstrate that the surveyed sample was slightly older and more experienced than the

TABLE 3
Age of Respondents

AGE	FREQUENCY	PERCENT	CUMULATIVE FREQUENCY	CUMULATIVE PERCENT
<24	5	2.7	5	2.7
25 - 30	64	35.2	69	37.9
31 - 35	54	29.7	123	67.6
36 - 40	47	25.8	170	93.4
>40	12	6.6	182	100.0

author expected from a group composed of predominately first lieutenants and captains. Sixty-two percent of the sample were older than 30 years, over 40 percent were commissioned through OTS/OCS, (implying prior service or civilian experience) and nearly 30 percent were prior enlisted.

TABLE 4
Source of Commission

SOURCE	FREQUENCY	PERCENT	CUMULATIVE FREQUENCY	CUMULATIVE PERCENT
ROTC	77	42.3	77	42.3
OTS/OCS	73	40.1	150	82.4
USAF A	19	10.4	169	92.9
Other	13	7.1	182	100.0

TABLE 5
Prior Enlisted Experience

PRIOR	FREQUENCY	PERCENT	CUMULATIVE FREQUENCY	CUMULATIVE PERCENT
No Prior	128	70.3	128	70.3
Yes, <4	21	11.5	149	81.9
Yes, >4	33	18.1	182	100.0

Tables 6 and 7 reveal similar information about the ranks of the respondents and their years of commissioned service. Both tables show a fairly normal distribution of the commissioned/officer years.

TABLE 6
Rank of Respondents

RANK	FREQUENCY	PERCENT	CUMULATIVE FREQUENCY	CUMULATIVE PERCENT
1Lt	44	24.2	44	24.2
Capt <8 yrs	56	30.8	100	54.9
Capt >8 yrs	46	25.3	146	80.2
Major	35	19.2	181	99.5
2Lt	1	0.5	182	100.0

TABLE 7
Years of Commissioned Service

YEARS	FREQUENCY	PERCENT	CUMULATIVE FREQUENCY	CUMULATIVE PERCENT
0-3	42	23.1	42	23.1
4-7	61	33.5	103	56.6
8-11	40	22.0	143	78.6
12-15	39	21.4	182	100.0

Tables 8 and 9 show the career background of the respondents. Nearly 20 percent were rated officers. Table 9 shows the vast cross-section of AFSCs that were reached by the survey; 31 different AFSCs responded.

TABLE 8
Aeronautical Rating

AERO RATING	FREQUENCY	PERCENT	CUMULATIVE FREQUENCY	CUMULATIVE PERCENT
Not Rated	147	80.8	147	80.8
Pilot	11	6.0	158	86.8
Nav	23	12.6	181	99.5
Other	1	0.5	182	100.0

TABLE 9
Present AFSC

AFSC	FREQUENCY	PERCENT	AFSC	FREQUENCY	PERCENT
00XX	1	0.6	64XX	7	3.9
10XX	2	1.1	65XX	14	7.8
14XX	2	1.1	66XX	10	5.6
15XX	2	1.1	67XX	8	4.5
18XX	1	0.6	70XX	3	1.7
20XX	1	0.6	73XX	3	1.7
22XX	3	1.7	74XX	2	1.1
26XX	4	2.2	79XX	1	0.6
27XX	29	16.2	80XX	2	1.1
28XX	35	19.6	90XX	3	1.7
31XX	6	3.4	91XX	2	1.1
40XX	8	4.5	93XX	1	0.6
49XX	10	5.6	95XX	1	0.6
55XX	3	1.7	96XX	1	0.6
60XX	7	3.9	97XX	4	2.2
			98XX	1	0.6

These AFSCs are summarized in Table 10, Career Summary. This summary is used as the baseline when in relating career backgrounds to other factors.

TABLE 10
Career Summary

CAREER FIELD	FREQUENCY	PERCENT	CUMULATIVE FREQUENCY	CUMULATIVE PERCENT
None stated	4	.	.	.
Cmdr/Director	2	1.1	2	1.1
Operations	11	6.2	13	7.3
Science/Acquisition	68	38.2	81	45.5
Logistics	52	29.2	133	74.7
Comm/Computer Sys	10	5.6	143	80.3
Civil Eng	3	1.7	146	82.0
Acctg & Finance	8	4.5	154	86.5
Personnel Resources	8	4.5	162	91.0
Public Affairs	1	0.6	163	91.6
Intelligence	2	1.1	165	92.7
Medical Careers	13	7.3	178	100.0

Table 11 shows that nearly half of the respondents had secondary AFSCs, indicating the breadth of experience among the respondents.

TABLE 11
Respondents With a Secondary AFSC

2ND AFSC	FREQUENCY	PERCENT	CUMULATIVE FREQUENCY	CUMULATIVE PERCENT
Yes	89	49.2	89	49.2
No	92	50.8	181	100.0

Research Question One

The first research question, mentioned in Chapters 1 and 3, asks "Is the Combat Support Doctrine understandable?"

Table 12 (duplicated from Table 1, Chapter 3) shows which survey questions were intended to answer this question. The answers to these particular survey questions are presented as frequency counts in Tables 13-19.

TABLE 12
Relationship Between Research and Survey Questions

<u>Research Question</u>	<u>Survey Questions to Answer It</u>
Is the Combat Support Doctrine understandable?	1, 2, 8, 9, 11, 12, 15-23
Is the Combat Support Doctrine meaningful?	3-8, 10, 12, 13
Does the Combat Support Doctrine need additional materials to make it understandable and meaningful?	1, 20, & the difference between group scores on 15-19
If not understandable and meaningful, is the doctrine itself at fault?	1-9, 11, 15-19, 21-39 (background)
How much does the Air Force emphasize the study of doctrine?	1, 21, 22, 23

Table 13 indicates whether or not the respondents had ever seen the AFM 2-15 before, and where they had seen it; this information is useful in determining whether they understood it by themselves, or whether or not other information was useful to them. Over half of the surveyed respondents had not seen or heard of the Combat Support

Doctrine. A surprisingly large number (8.79 percent) did not answer the question.

TABLE 13

Seen AFM 2-15 Prior to Survey

SOURCE	FREQUENCY	PERCENT	CUMULATIVE FREQUENCY	CUMULATIVE PERCENT
Did not answer	16	.	.	.
Journals	15	9.0	15	9.0
PME	27	16.3	42	25.3
Work	17	10.2	59	35.5
Briefing	13	7.8	72	43.4
Not seen	94	56.6	166	100.0

Table 14 shows the most direct relationship between the research question and the survey question. Nearly 90 percent of the respondents either agreed or strongly agreed that the manual was easy to understand.

TABLE 14

AFM 2-15 is Easy to Understand

OPINION	FREQUENCY	PERCENT	CUMULATIVE FREQUENCY	CUMULATIVE PERCENT
Str Disagree	6	3.3	6	3.3
Disagree	12	6.6	18	9.9
Neutral	8	4.4	26	14.3
Agree	109	59.9	135	74.2
Str Agree	47	25.8	182	100.0

Table 15 shows the respondents' opinions about the statement "I think that the title, Combat Support Doctrine, captures the essence of Air Force logistical functions." Exactly 74 percent of the respondents agreed or strongly agreed with the statement.

TABLE 15
Title Captures the Essence of Logistical Functions

OPINION	FREQUENCY	PERCENT	CUMULATIVE FREQUENCY	CUMULATIVE PERCENT
Did not answer	1	.	.	.
Str Disagree	2	1.1	2	1.1
Disagree	25	13.8	27	14.9
Neutral	20	11.0	47	26.0
Agree	114	63.0	161	89.0
Str Agree	20	11.0	181	100.0

Table 16 shows the results to the statement "I think that the Combat Support Doctrine adequately explains the combat support processes and their relationship with each other." Again, the majority of the respondents (72.2 percent) either agreed or strongly agreed to this statement.

The next two tables relate the respondents' opinions of how well they understood the doctrine to their particular career background. These tables reveal that a smaller percentage of the respondents felt that there was a strong relationship between the doctrine and how they understood their jobs.

TABLE 16
AFM 2-15 Explains Processes

OPINION	FREQUENCY	PERCENT	CUMULATIVE FREQUENCY	CUMULATIVE PERCENT
Did Not Answer	1	.	.	.
Str Disagree	6	3.3	6	3.3
Disagree	22	12.2	28	15.5
Neutral	17	9.4	45	24.9
Agree	123	68.0	168	92.8
Str Agree	13	7.2	181	100.0

The opinions expressed in Table 17 indicate that just 59.4 percent of the respondents felt certain that their own career background helped them to understand the doctrine.

TABLE 17
Career Background Helps Me Understand AFM 2-15

OPINION	FREQUENCY	PERCENT	CUMULATIVE FREQUENCY	CUMULATIVE PERCENT
Str Disagree	5	2.7	5	2.7
Disagree	30	16.5	35	19.2
Neutral	39	21.4	74	40.7
Agree	82	45.1	156	85.7
Str Agree	26	14.3	182	100.0

Table 18 presents the opinions about the statement "The Combat Support Doctrine has helped me to better understand the interrelationship between my job and other combat

support functions." Only 45.3 percent of the respondents agreed or strongly agreed with this concept.

TABLE 18

AFM 2-15 Helps Me Understand Relationship
Between My Job And Other Functions

OPINION	FREQUENCY	PERCENT	CUMULATIVE FREQUENCY	CUMULATIVE PERCENT
Don't Not Answer	1	.	.	.
Str Disagree	7	3.9	7	3.9
Disagree	43	23.8	50	27.6
Neutral	49	27.1	99	54.7
Agree	74	40.9	173	95.6
Str Agree	8	4.4	181	100.0

The final survey item that related to research question 1 concerned the "understand" scores of each respondent for items 15-19 (see Appendix A). These items attempted to see how well the test group comprehended the contents of the Combat Support Doctrine. Table 19 presents the scores of the test group, ranging from 2 through 5, with 5 being a

TABLE 19

AFM 2-15 Scores

SCORE	FREQUENCY	PERCENT	CUMULATIVE FREQUENCY	CUMULATIVE PERCENT
2	4	2.2	4	2.2
3	5	2.7	9	4.9
4	56	30.8	65	35.7
5	117	64.3	182	100.0

perfect score. As Table 19 indicates, everyone scored at least 2 points, and the vast majority (95.1 percent) of the test group made a score of 4 or 5 points.

Research Question Two

The second research question asks "Is the Combat Support Doctrine Meaningful?" This research question was answered by nine items (see Table 12) on the survey. These items are presented in Tables 20-26.

Tables 20-24 reflect the respondents' opinions about the length of the manual, the style, and the meaning of the Combat Support Doctrine. Tables 20 and 21 show that the majority of the respondents (68.1 percent and 56.6 percent,

TABLE 20
AFM 2-15 is Too Short

OPINION	FREQUENCY	PERCENT	CUMULATIVE FREQUENCY	CUMULATIVE PERCENT
Str Disagree	26	14.3	26	14.3
Disagree	98	53.8	124	68.1
Neutral	49	26.9	173	95.1
Agree	8	4.4	181	99.5
Str Agree	1	0.5	182	100.0

respectively) felt that the Air Force manual was neither too short or too long. However, a significant number of the respondents were neutral about their opinion.

TABLE 21
AFM 2-15 is Too Long

OPINION	FREQUENCY	PERCENT	CUMULATIVE FREQUENCY	CUMULATIVE PERCENT
Str Disagree	19	10.4	19	10.4
Disagree	84	46.2	103	56.6
Neutral	58	31.9	161	88.5
Agree	13	7.1	174	95.6
Str Agree	8	4.4	182	100.0

The next two tables present the results for the clearness and verboseness of the Combat Support Doctrine. Table 22 shows that 31.5 percent of the test group felt that the manual was ambiguous. Next, Table 23 shows that

TABLE 22
AFM 2-15 is Ambiguous

OPINION	FREQUENCY	PERCENT	CUMULATIVE FREQUENCY	CUMULATIVE PERCENT
Did not Answer	1	.	.	.
Str Disagree	15	8.3	15	8.3
Disagree	109	60.2	124	68.5
Neutral	20	11.0	144	79.6
Agree	30	16.6	174	96.1
Str Agree	7	3.9	181	100.0

only 44 percent of the respondents felt that the manual was "wordy," or long-winded.

TABLE 23
AFM 2-15 is Wordy

OPINION	FREQUENCY	PERCENT	CUMULATIVE FREQUENCY	CUMULATIVE PERCENT
Str Disagree	21	11.5	21	11.5
Disagree	81	44.5	102	56.0
Neutral	31	17.0	133	73.1
Agree	33	18.1	166	91.2
Str Agree	16	8.8	182	100.0

Table 24 shows that 67.5 percent of the respondents felt that AFM 2-15 was clear and concise. A few of the respondents wrote comments indicating that the manual was concise, but not clear to them.

TABLE 24
AFM 2-15 is Clear & Concise

OPINION	FREQUENCY	PERCENT	CUMULATIVE FREQUENCY	CUMULATIVE PERCENT
Str Disagree	10	5.5	10	5.5
Disagree	33	18.1	43	23.6
Neutral	16	8.8	59	32.4
Agree	106	58.2	165	90.7
Str Agree	17	9.3	182	100.0

The next item on the survey, exploring how meaningful the manual was to the test group, has already been presented in Table 15, showing the opinions about how well the title, Combat Support Doctrine, captures the essence of Air Force

logistical functions. Exactly 74 percent agreed or strongly agreed that the title did capture the essence of logistical functions in the Air Force; an indication that the doctrine is meaningful.

Table 25 contains the respondents' answers to the statement "I feel that this doctrine helps to clarify my role and mission in the Air Force." Less than half (45.6) of the respondents agreed or strongly agreed to this statement.

TABLE 25
Doctrine Helps Clarify My Role and Mission

OPINION	FREQUENCY	PERCENT	CUMULATIVE FREQUENCY	CUMULATIVE PERCENT
Str Disagree	10	5.5	10	5.5
Disagree	39	21.4	49	26.9
Neutral	50	27.5	99	54.4
Agree	75	41.2	174	95.6
Str Agree	8	4.4	182	100.0

The eighth item on the survey answered research question two and was presented in Table 18. This item explored the idea of the doctrine helping the reader to better understand the interrelationship between their job and other (or any) combat support functions. Less than half of the respondents, 45.3 percent, found this aspect of the doctrine meaningful.

The last survey item that evaluated the meaningfulness of the Combat Support Doctrine is presented in Table 26, and shows the opinion about the statement "I think that the Combat Support Doctrine is very important, and everyone in the Air Force should read it." This strong statement was agreed or strongly agreed to by 60.4 percent of the respondents.

TABLE 26
All in AF Should Read AFM 2-15

OPINION	FREQUENCY	PERCENT	CUMULATIVE FREQUENCY	CUMULATIVE PERCENT
Str Disagree	9	4.9	9	4.9
Disagree	26	14.3	35	19.2
Neutral	37	20.3	72	39.6
Agree	79	43.4	151	83.0
Str Agree	31	17.0	182	100.0

Research Question Three

The next research question asks, "Does the Combat Support Doctrine need additional materials to make it understandable and meaningful?" This question was researched by using two questions on the survey, and by comparing the differences between the "understand" scores of Group A and Group B (see Table 12).

The first question on the survey (Appendix A) asked whether or not the respondents had ever seen the Combat Support Doctrine prior to the survey (see Table 13). Their answers were condensed into simply "yes" or "no" and

crosstabulated with the "understand" scores. The "yes" cell of the table indicated that the respondents had not only seen the doctrine before, but had received some additional material along with the doctrine. The Chi-square test of differences was used to determine if there was a relationship between the two variables. The test shows that the two variables are independent of each other; there was no significant difference in the scores between the "yes" and "no" cells.

TABLE 27
TABLE OF SCORE BY SEE SUMMARY

SCORE (Understand AFM 2-15 Score)			
SEESUM (Seen AFM 2-15 Summary)			
FREQUENCY	Yes	No	TOTAL
2	1	2	3
3	2	1	3
4	23	26	49
5	46	65	111
TOTAL	72	94	166

CHI-SQUARE = 1.208 PROB VALUE = 0.751

The next three tables present the respondents' opinions about making the Combat Support Doctrine more understandable through the use of additional materials (briefings, video,

or other written material). The most positive opinion was to add video material; 59.3 percent thought that it would be useful or very useful (Table 29). Only 26.7 percent of the respondents felt the same way about adding any more written material (Table 30). Nearly half of the surveyed sample felt that a briefing would be useful or slightly useful for understanding the doctrine (Table 28).

TABLE 28
Opinion of Adding Briefing

OPINION	FREQUENCY	PERCENT	CUMULATIVE FREQUENCY	CUMULATIVE PERCENT
Did Not Answer	7	.	.	.
Not Useful	30	17.1	30	17.1
Slightly Useful	65	37.1	95	54.3
Useful	69	39.4	164	93.7
Very Useful	11	6.3	175	100.0

TABLE 29
Opinion of Adding Video

OPINION	FREQUENCY	PERCENT	CUMULATIVE FREQUENCY	CUMULATIVE PERCENT
Did Not Answer	5	.	.	.
Not Useful	23	13.0	23	13.0
Slightly Useful	49	27.7	72	40.7
Useful	72	40.7	144	81.4
Very Useful	33	18.6	177	100.0

TABLE 30
Opinion of Adding Written Material

OPINION	FREQUENCY	PERCENT	CUMULATIVE FREQUENCY	CUMULATIVE PERCENT
Did Not Answer	6	.	.	.
Not Useful	52	29.5	52	29.5
Slightly Useful	77	43.8	129	73.3
Useful	43	24.4	172	97.7
Very Useful	4	2.3	176	100.0

A t-test was used to compare the difference between Group A's scores, and Group B's scores. Table 31 shows the groups' mean scores, and standard deviations. The test revealed a t-value of .4526; this does not fall into the rejection region of $t > 1.645$. Thus, at a significance level of .05, there is not sufficient evidence to conclude that Group A had higher scores than Group B.

TABLE 31
Group Scores

GROUP	N	MEAN	STD DEV
Group A	34	4.61	0.603
Group B	148	4.56	0.672
t-value = 0.4526			

Research Question Four

The next research question asked "If [the doctrine is] not understandable and meaningful, is the doctrine itself at fault?" This question was researched by utilizing most of the survey items (see Table 12). The first part of this question was analyzed by research questions 1 and 2, for understandability and meaningfulness, respectively.

Table 14 showed that almost 90 percent of the respondents agreed or strongly agreed that the manual was easy to understand. Also, the scores presented in Table 19 show that almost all of the respondents did very well, indicating that they understood the doctrine. However, Table 26, which notes the opinions for the statement "I think the Combat Support Doctrine is very important, and everyone in the Air Force should read it," shows that only 60.4 percent of the respondents agreed or strongly agreed. These survey questions and their results establish that the doctrine is understandable, but not absolutely meaningful. Therefore, the remainder of this section concentrates on answering the amended question "If not meaningful, is the doctrine itself at fault?"

The statement mentioned above, "I think the Combat Support Doctrine is very important, and everyone in the Air Force should read it," was used as a key "meaningfulness" variable. This key variable was crosstabulated with educational and personal background items from the second and third sections of the survey. The Chi-square test for

independence was used to determine any dependent relationships between the opinions about the key variable and the background factor. Examples of these background factors were PME education, type of undergraduate degree, history studied, age, rank, aeronautical rating, etc. There were 17 factors crosstabulated with the key variable. The X^2 tests were conducted at the .05 significance level.

At this significance level, only two of the Chi-square tests showed any relationship between the key meaningfulness variable and the different background factors. These two factors were major command experience, and the AFSC career backgrounds. However, these tests were not considered valid because 80 and 83 percent, respectively, of the cells in the table had counts less than 5. Siegel notes that "fewer than 20 percent of the cells should have an expected frequency of less than 5, and no cell should have an expected frequency of less than 1" (27:178). These tables and their statistics are provided in Appendix D.

Research Question Five

The last research question asks, "How much does the Air Force emphasize the study of doctrine?" This question was researched by survey items (see Table 12) and by part of the literature review in Chapter II. This section presents the results of the survey items. The rest of the research is discussed in Chapter V.

The first survey question, presented previously in Table

13, showed that more than half of the respondents had not seen the Combat Support Doctrine prior to the survey, although by this time period the new doctrine had been released for 17 months.

The next three tables provide the results from survey items 21-23. The first table, Table 32, shows how many of the respondents had read any other Air Force doctrines. Nearly 37 percent of the test group said that they had not read any doctrine at all. The Air Force's most basic doctrine, AFM 1-1, had been read by 58.4 percent of the group.

TABLE 32
Other AF Doctrines Read

READ	FREQUENCY	PERCENT	CUMULATIVE FREQUENCY	CUMULATIVE PERCENT
Did Not Answer	2	.	.	.
AFM 1-1	68	37.8	68	37.8
AFM 2-1	4	2.2	72	40.0
Other AFM	5	2.8	77	42.8
None	66	36.7	143	79.4
Both AFM 1-1 & 2-1	37	20.6	180	100.0

Item 22 of the survey asked the respondents to select the best definition of doctrine. The results are shown in Table 33. The correct answer was "Officially taught," which is the shortened version (from the survey) of "the officially taught procedures, based upon numerous, repeated

experiences, to be used to carry out military operations." Only 41.1 percent of the group selected this answer.

TABLE 33
Definition of Doctrine

DEFINITION	FREQUENCY	PERCENT	CUMULATIVE FREQUENCY	CUMULATIVE PERCENT
Did Not Answer	2	.	.	.
Statement	59	32.8	59	32.8
Officially Taught	74	41.1	133	73.9
Abstract Truth	47	26.1	180	100.0

The next survey item asked the question "Have you studied any other military history outside of mandatory USAFA/ROTC/OTS/PME classes? (For example, biographies of military leaders, battle histories, etc.)" Table 34 shows the answers to this item. Slightly more than half of the group said yes.

TABLE 34
Self-Study of History

HISTORY	FREQUENCY	PERCENT	CUMULATIVE FREQUENCY	CUMULATIVE PERCENT
Did Not Answer	1	.	.	.
Yes	98	54.1	98	54.1
No	83	45.9	181	100.0

Other Findings

This section presents a few interesting findings from the survey that did not particularly pertain to any specific research question. They deal with doctrine and combat, and combat experience.

Table 35 presents the findings from survey item 14, which states "I think doctrine is important for understanding combat." Most of the respondents, 71.4 percent, agreed or strongly agreed to this statement.

TABLE 35

Doctrine is Important for Understanding Combat

OPINION	FREQUENCY	PERCENT	CUMULATIVE FREQUENCY	CUMULATIVE PERCENT
Str Disagree	2	1.1	2	1.1
Disagree	24	13.2	26	14.3
Neutral	26	14.3	52	28.6
Agree	94	51.6	146	80.2
Str Agree	36	19.8	182	100.0

The next two tables show how much actual and simulated combat experience the respondents had. More than 90 percent of the respondents had no actual combat experience. This is not surprising, since it has been so long since the U.S. was involved in a major conflict. Only 44.1 percent of the respondents had been in a simulated combat environment.

TABLE 36
Any Actual Wartime Experience

ACTUAL	FREQUENCY	PERCENT	CUMULATIVE FREQUENCY	CUMULATIVE PERCENT
Yes	17	9.3	17	9.3
No	165	90.7	182	100.0

TABLE 37
Any Simulated Combat Experience

SIMULATE	FREQUENCY	PERCENT	CUMULATIVE FREQUENCY	CUMULATIVE PERCENT
Did not answer	3	.	.	.
Yes	79	44.1	79	44.1
No	100	55.9	179	100.0

Summary

This chapter presented the findings and analysis from the survey instrument. Some general information about the data collection and demographics was first presented. This was followed by five sections, presenting the findings for each of the original five research questions. Finally, a section for some additional findings was presented.

The next chapter provides the conclusions and recommendations of the author, based upon the Chapter IV results and analysis.

V. Conclusions and Recommendations

Introduction

This study developed a survey to see how understandable and meaningful the Combat Support Doctrine, AFM 2-15, is to Air Force officers, and to determine the need for additional materials. The specific problem addressed in Chapter I was "Is the Combat Support Doctrine understandable and meaningful to today's officer, or are additional materials, either verbal, visual, or written or all of these, necessary for an officer to understand the doctrine?" In addition, the purpose of this study, if it was determined that the doctrine did require additional materials to clarify it, was to determine if the doctrine itself was at fault, or if the problem was related to how much the Air Force emphasizes the study of doctrine. The specific problem and the purpose of this research were studied by five research questions.

This chapter presents the conclusions for each research question. Recommendations for how to present AFM 2-15 (now AFM 1-10) and for further research are also provided. The chapter summary concludes with the results for the specific problem and purpose of this study.

Conclusions

Research Question One. The first question in Chapter I asked, "Is the Combat Support Doctrine, AFM 2-15, understandable by today's USAF officers?" The results show that

the majority of the respondents understood the manual, and felt that it was not difficult to understand (see Table 14). The high "understand" scores of the respondents also indicated a good comprehension of the Combat Support Doctrine.

Research Question Two. The next question asked if the doctrine was meaningful to these same officers. This question was explored in terms of content and style, and also as to how well the officer related the Combat Support Doctrine to his mission and role in the Air Force.

The writing style of the manual was effective. The respondents were positive about the length of the manual, and only 31.5 percent believed that the doctrine was ambiguous. Like many official documents, some respondents (44 percent) thought that the doctrine was "wordy." But more than two-thirds of the group felt that the Combat Support Doctrine was clear and concise.

Several survey items related the officers' opinions about the contents of the Combat Support Doctrine to their daily work. The majority of the respondents did not feel that AFM 2-15 helped to clarify their own role in the Air Force, or to explain the relationship between their jobs and other (or any) combat support functions. However, they did feel that AFM 2-15 was important, and should be widely read and distributed throughout the Air Force.

Overall, the Combat Support Doctrine was "meaningful" in terms of style. However, to the majority of the group, the

manual, as an Air Force doctrine, did not develop the concept of relating the officers' daily work to combat support roles.

Research Question Three. This question speculated if the Combat Support Doctrine needed additional materials to make it understandable and meaningful. The results for the above two questions show that the doctrine is understandable, but it could use some help to make it more meaningful to an officer trying to relate his daily world to combat support.

A picture is worth a thousand words, and the majority of the respondents felt that video material would make AFM 2-15 more meaningful. Almost half of the group also favored a briefing to accompany the manual.

Research Question Four. The fourth question asked, "If the manual is not understandable and meaningful, is the doctrine itself at fault?" The findings in Chapter IV established that the doctrine was understandable, but not entirely meaningful, and thus answered the modified question "If not meaningful, is the doctrine itself at fault?"

The analysis crosstabulated educational and personal background factors with the "meaningfulness" key variable. This variable was the respondents' opinions about the survey item "AFM 2-15 is very important and should be read by everyone in the Air Force." Although there was no demonstrated dependent relationship between this variable and any of the background factors, this research simply

concludes that there is not enough sufficient evidence to positively state that the doctrine itself is at fault for any lack of meaningfulness.

Research Question Five. The final research question was to determine how much the Air Force emphasizes the study of doctrine. Research was done through both the survey (presented in Chapter IV) and through the literature review in Chapter II. Chapter II reviewed current doctrine education at the precommissioning sources, Professional Military Education (PME) schools for officers O-2 through O-4, and through Project Warrior.

The findings in Chapter IV showed that slightly more than half of the surveyed officers had read AFM 1-1. Over one third of the respondents said that they had not read any Air Force doctrine. Only 41.1 percent of the officers chose the correct definition of doctrine from a selection of three choices. Doctrine is based upon history, and more than half of the respondents said that they had individually studied military history.

The review of doctrine education in the Project Warrior program showed that there is some informal study of military history, and that war game clubs, if established, study tactics and strategies. But there is not any study of actual Air Force doctrine.

The PME schools, Squadron Officer School (SOS) and Air Command and Staff College (ACSC), have both increased their teaching of Air Force Doctrine in recent years. SOS

students read and study AFM 1-1 for eight percent of one test (of three tests). ACSC students trace Air Force doctrine historically, observing the uses and misuses of doctrine, and how it has evolved with technology and national policy. ACSC students also relate Air Force doctrine to joint doctrine.

The precommissioning sources, Air Force ROTC, Officer Training School (OTS), and the Air Force Academy (USAFA), have similar programs for doctrine education. USAFA has the most extended program, covering AFM 1-1 in one half semester, and joint doctrine during another full semester. ROTC students also study AFM 1-1, using it as one of their textbooks during a semester course about American defense policy. Both USAFA and ROTC students have their own copy of AFM 1-1 to study during the term. OTS students do not receive a copy of AFM 1-1, but it is referred to heavily during lessons. One lesson about Air Force doctrine is read by the students, but not discussed in class. Another lesson, like the USAFA students, covers joint doctrine.

In summary, the Air Force only emphasizes the study of doctrine at formal schools. The precommissioning sources cover doctrine fairly well in depth, but most of the students have no Air Force experience at the time to relate to the lessons and lectures, in order for doctrine to be more meaningful to them. SOS students are exposed to the idea of doctrine, but it is not related much to their jobs. Only half of officers attend SOS in residence, and

correspondence students do not see AFM 1-1. ACSC students in residence study doctrine much more, but it is after officers already have 12-14 years of commissioned service. Like SOS, not every officer has the opportunity to attend ACSC in residence. Overall, the Air Force does not emphasize the study of doctrine on a regular, timely basis, or at any great depth.

Recommendations

Presenting AFM 2-15. The best package to accompany AFM 1-10 as it is distributed throughout the Air Force is a audiovisual type. One idea that CADRE at Maxwell AFB, AL is working on is a film that can show the impact combat support forces make on the preparation for war (23). Another "package" that would help would be a briefing about the vital role played by combat support forces in war. However, a film is much more accessible to Air Force members.

Doctrine at AFIT. Although the primary purpose of the AFIT graduate program is not professional military education, it is nonetheless a military institution. The school grants graduate degrees to Air Force members in order to enhance their ability to carry out their Air Force mission.

Currently, the majority of the students at the School of Systems and Logistics review the Combat Support Doctrine, and other articles and drafts about logistics doctrine. This occurs during the first quarter of a 15 month program.

They are also briefly exposed to logistics doctrine in another course during the third or fourth quarter, depending upon their particular program.

This research is partially based upon the experiences of being an AFIT student pursuing a master's degree. This study recommends that doctrine should be emphasized more at AFIT; and used as a foundation for the graduate program. More specifically, AFM 1-1 should be reviewed, and AFM 1-10, Combat Support Doctrine, should be used to show students where their own mission fits into combat support.

The doctrine education program should be presented to all AFIT graduate students, in both the School of Systems and Logistics, and in the School of Engineering. Although students may not directly relate their mission in the Air Force to a statistical formula or a laboratory exercise, students should be aware, in broader terms, how their educational pursuits relate to their mission and duty, not just to their "job."

Students should review AFM 1-1, and be introduced to AFM 1-10, during the first quarter. Doctrine should be introduced and discussed during an overview class, such as Logistic Systems Overview, LOGM 567. Through subsequent courses, especially in courses that specifically relate to the students' degree, doctrine should again be referenced, reemphasizing the combat support role behind the technical aspects of their jobs.

Further Research. This study has two recommendations for future research about the impact of the Combat Support Doctrine. The first recommendation is to survey the reactions and attitudes of a group of officers who are more operationally oriented. Most officers at Wright-Patterson AFB are involved with research and development in their daily work. It would be interesting to compare TAC base results, for example, to the WPAFB results. It would also be beneficial to see if the medical career officers at another base have similar opinions.

The second recommendation is develop a more stringent "testing" instrument and/or environment to determine the officers' comprehension of the Combat Support Doctrine. The five questions on the survey instrument (items 15-19, Appendix A) were not very difficult nor all encompassing.

Summary

This chapter presented the conclusions of this study. The Combat Support Doctrine is understandable, and partially meaningful, to today's Air Force officer. Selected comments about AFM 2-15 from the respondents is provided in Appendix B. There was not sufficient evidence to determine whether the doctrine itself is at fault for not being totally meaningful. The Air Force does not emphasize the study of doctrine on a regular, in depth basis. If doctrine is not strongly emphasized as the foundation for the preparation for war, new doctrine, such as AFM 1-10, is not as

significant to Air Force members.

It was recommended that a film accompany AFM 1-10 to help make it more meaningful, especially to relate the importance of combat support functions to the daily work of Air Force members. It was also recommended that doctrine education should be more emphasized at AFIT graduate programs.

This chapter concluded with two recommendations for further research on the Combat Support Doctrine. These recommendations dealt with the type of sample to be surveyed, and the type of instrument to use.

Appendix A: Survey Instrument




DEPARTMENT OF THE AIR FORCE
HEADQUARTERS UNITED STATES AIR FORCE
WASHINGTON, D.C. 20330-5130

REPLY TO
ATTN OF LEX

SUBJECT: Combat Support Doctrine Survey Package

TO: Survey Participant

1. The Air Force has recently published a new manual--Combat Support Doctrine, Air Force Manual 2-15. This manual establishes doctrine for the support of aerospace forces. Effective April 1987, AFM 2-15 became AFM 1-10.
2. Combat Support Doctrine provides a broad overview from which lower, more specific levels of doctrine will be developed. As such, it is important that this doctrine be read and we receive feedback on its value to the "real" Air Force.
3. You have been randomly selected and asked to participate in this research survey. The Combat Support Doctrine has been provided to you so you can answer the questionnaire. Information on your background and your opinion of the doctrine are extremely valuable. However, for the results of this research to be valid, it is essential that you read the doctrine, and then answer the attached survey.
4. All of the information you provide will be strictly confidential. No individual names will be used with any analysis of the surveys. The results of the analysis will become part of an Air Force Institute of Technology thesis, and will be forwarded to the Air Staff.
5. Your participation is completely voluntary, but we would greatly appreciate your help. Please take the time to read the doctrine, complete the survey, and return it in the enclosed envelope within ten working days. The manual is yours to keep. If you have any questions, contact Capt Linda K. Smariga at (513) 255-5435. Thank you for your cooperation.


THOMAS A. LaPLANTE, Maj Gen, USAF
Director of Logistics Plans & Programs
DCS/Logistics & Engineering

- 3 Atch
1. AFM 2-15
2. Survey
3. Return Envelope

COMBAT SUPPORT DOCTRINE SURVEY

Instructions

Please read the enclosed AFM 2-15, Combat Support Doctrine BEFORE answering the questions. Please circle the best answer for each question.

Opinion and Interpretation of AFM 2-15

1. Have you ever seen or heard of the Combat Support Doctrine (AFM 2-15) prior to this survey?
 - a. Yes, in professional journals (i.e., Air University Review, Air Force Journal of Logistics).
 - b. Yes, at PME school (SOS, ACSC, AWC).
 - c. Yes, at work (correspondence, from peers).
 - d. Yes, I attended a briefing about AFM 2-15.
 - e. No, I have not heard of AFM 2-15.

Please use the following scale to answer items 2-18.

STRONGLY DISAGREE	DISAGREE	NEITHER AGREE OR DISAGREE	AGREE	STRONGLY AGREE
A	B	C	D	E
2.	I think that AFM 2-15 is easy to understand.			
A	B	C	D	E
3.	I think that AFM 2-15 is too short.			
A	B	C	D	E
4.	I think that AFM 2-15 is too long.			
A	B	C	D	E
5.	I think that AFM 2-15 is ambiguous.			
A	B	C	D	E
6.	I think that AFM 2-15 is clear and concise.			
A	B	C	D	E

- | STRONGLY
DISAGREE | DISAGREE | NEITHER
AGREE OR
DISAGREE | AGREE | STRONGLY
AGREE |
|----------------------|----------|---------------------------------|-------|-------------------|
| A | B | C | D | E |
7. I think that AFM 2-15 is "wordy."
A B C D E
 8. I think that the title, Combat Support Doctrine,
captures the essence of Air Force logistical functions.
A B C D E
 9. I think that the Combat Support Doctrine adequately
explains the combat support processes and their
relationship with each other.
A B C D E
 10. I feel that this doctrine helps to clarify my role and
mission in the Air Force.
A B C D E
 11. I feel that my particular career field background helps
me to understand this doctrine.
A B C D E
 12. The Combat Support Doctrine has helped me to better
understand the interrelationship between my job and
other combat support functions.
A B C D E
 13. I think the Combat Support Doctrine is very important,
and everyone in the Air Force should read it.
A B C D E
 14. I think doctrine is important for understanding combat.
A B C D E
 15. According to AFM 2-15, the entire combat support
process is cyclical and represents the life cycles of
man and machines.
A B C D E

STRONGLY DISAGREE	DISAGREE	NEITHER AGREE OR DISAGREE	AGREE	STRONGLY AGREE
----------------------	----------	---------------------------------	-------	-------------------

A	B	C	D	E
---	---	---	---	---

16. AFM 2-15 says that combat support exists to meet combat operational needs and that combat operations are impossible without combat support.

A	B	C	D	E
---	---	---	---	---

17. AFM 2-15 states that an aerospace system is simply an aerospace vehicle, such as an aircraft or missile.

A	B	C	D	E
---	---	---	---	---

18. The fifth principle, Trauma/Friction, in Chapter 3 of AFM 2-15, essentially says that combat support forces must undergo realistic, stressful training to be able to successfully transition from peacetime to the intense destruction and chaos of war.

A	B	C	D	E
---	---	---	---	---

19. Please identify which combat support process your AFSC is related to:

a. Definition process	e. Integration process
b. Acquisition process	f. Preservation process
c. Maturation process	g. Restoration process
d. Distribution process	h. Disposition process

20. How useful would the following additional material be to better understand the Combat Support Doctrine?
(Check your reply for each.)

	NOT USEFUL	SLIGHTLY USEFUL	USEFUL	VERY USEFUL
a. Briefing	_____	_____	_____	_____
b. Video	_____	_____	_____	_____
c. Other written material	_____	_____	_____	_____

Educational Background

21. What other Air Force doctrines have you read?

a. AFM 1-1
b. AFM 2-1
c. Other _____
d. I have not read any other Air Force doctrine.

22. Select the best definition of doctrine.
- a. A statement of objectives, courses of action, targets, and forces to be utilized.
 - b. The officially taught procedures, based upon numerous, repeated experiences, to be used to carry out military operations.
 - c. An abstract truth, either a word or phrase, that is self-evident; that is, validated by long use and widespread acceptance.
23. Have you studied any other military history outside of mandatory USAFA/ROTC/OTS/PME classes? (For example, biographies of military leaders, battle histories, etc)
- a. Yes
 - b. No
24. What PME schools have you completed? (Circle all apply)
- a. I have not completed any PME school.
 - b. SOS - correspondence
 - c. SOS - residence
 - d. ACSC - correspondence
 - e. ACSC - correspondence/seminar
 - f. ACSC - residence
 - g. AWC - correspondence/seminar
25. What was your undergraduate major?
- a. Engineering (electrical, mechanical, aeronautical, etc.)
 - b. Business (marketing, accounting, management, etc.)
 - c. Social Sciences (i.e., psychology, sociology, anthropology, etc.)
 - d. Science/Technical (chemistry, mathematics, computer science, etc.)
 - e. Humanities (English, music, art, philosophy, etc.)
 - f. Other (please specify) _____
26. What is the highest academic degree you have obtained? (If you have two types of masters' degrees, please circle both)
- a. Bachelors
 - b. Masters/ Non logistics area
 - c. Masters/ Logistics area (AFIT)
 - d. Masters/ Logistics area (Other than AFIT)
 - e. Doctorate
 - f. Other (please specify)

Personal Background

27. What is your sex?
- a. Female
 - b. Male

28. What is your age?
- a. Less than 24 years
 - b. 25-30 years
 - c. 31-35 years
 - d. 36-40 years
 - e. Greater than 40 years
29. What is the source of your commission?
- a. ROTC
 - b. OTS/OCS
 - c. USAFA
 - d. Other
30. What is your rank?
- a. First Lieutenant
 - b. Captain (less than eight years of commissioned service)
 - c. Captain (eight or more years of commissioned service)
 - d. Major
31. Have you had prior enlisted experience?
- a. No prior service
 - b. Yes, less than 4 years
 - c. Yes, 4 years or more
32. What is your aeronautical rating?
- a. Not rated
 - b. Pilot
 - c. Navigator
 - d. Other (specify) _____
33. What is your AFSC for your present job? _____
34. Do you hold any other AFSCs?
- a. Yes (please specify) _____
 - b. No
35. How many years of commissioned service do you have?
- a. 0-3 years
 - b. 4-7 years
 - c. 8-11 years
 - d. 12-15 years
36. Do you have any actual wartime combat experience?
- a. Yes (please specify) _____
 - b. No
37. Do you have any simulated combat exercise experience?
- a. Yes (please specify) _____
 - b. No

38. Please indicate which major command you have served in, and how many years (circle the appropriate number)

	YEARS						
a. AFCC	1	2	3	4	5	6	7+
b. AFLC	1	2	3	4	5	6	7+
c. AFSC	1	2	3	4	5	6	7+
d. ATC	1	2	3	4	5	6	7+
e. AU	1	2	3	4	5	6	7+
f. AAC	1	2	3	4	5	6	7+
g. ESC	1	2	3	4	5	6	7+
h. MAC	1	2	3	4	5	6	7+
i. PACAF	1	2	3	4	5	6	7+
j. SPACECOM	1	2	3	4	5	6	7+
k. SAC	1	2	3	4	5	6	7+
l. TAC	1	2	3	4	5	6	7+
m. USAFE	1	2	3	4	5	6	7+

39. What job levels have you held? (circle all that apply)

- a. Squadron
- b. Wing
- c. Numbered Air Force
- d. Separate Operating Agency
- e. MAJCOM Headquarters
- f. Air Staff
- g. Joint Service
- h. Other (please specify) _____

Thank you for your support in this study.

Please provide any suggestions or comments you have regarding the Combat Support Doctrine.

PLEASE RETURN THE QUESTIONNAIRE IN THE ENCLOSED ENVELOPE.

Appendix B: Selected Comments from Survey Respondents

Senior Captain, Civil Engineer

Taking ACSC by seminar [right] now gave [me] background on military doctrine and the [relationship between] operation's role vs. support's role. This made AFM 2-15 easily understood.

Expected cornerstone statements regarding Prime BEEF, Prime RIBS, Security Police, PERSCO, Disaster Preparedness, EOD missions. Turned out to be broader than expected but still interesting and potentially useful.

Senior Captain, Engineer

Once again, how does the "technical" officer connect with the "warrior" in the air?

Major, Contracting (Missile Operations Background)

There needs to be discussion relating combat support more directly to the specific principles of war.

More analysis is required on the validity of the discussion in paragraph 2-3, 2-4 as it applies to actual practice. Air Force and DoD have become greatly enamored to providing technological solutions to specific threats rather than creating a force structure capable of executing all of the principles of war. The result is knee jerk reactions to acquire various systems. Also, the acquisition command are providing the operational commands a technology which they hope the operational command can mature into practical combat use. This is much different than "...the Air Force must sometimes manage the development and production of equipment and facilities so they are effective in the combat environment."

Major, Nurse

This [AFM 2-15] should be the basis for PME. Develop SOS/ACSC/AWC on this structure to better educate the officer to the depth and discussion [level] of each concept in this volume. Think you did a good job with this one - it is straight and forward - "militarization" has been eliminated; great!

Junior Captain, Contracting Officer

It is too general. It is useful only in a philosophic, conceptual framework and has no practical applications. Seems to be written at the 9th or 10th grade level. Basically, it states the obvious. Lacking in psycho-social aspects; no esprit de corps; destroying the enemy's will to fight! It lacks the basic "savageness" of which war consists.

First Lieutenant, Acquisition Program Mgr

The doctrine as written is information everyone has seen before. I found it interesting, to see how I fit into the "big picture," because everyone sometimes forgets where they fit.

First Lieutenant, Engineer

I found the doctrine very interesting. I believe it is valuable reading for civilian as well as military personnel.

Junior Captain, Acquisition Program Mgr

[The section on disposition] is in poor taste. The first sentence says "Material can also be disposed in a number of ways." Several paragraphs follow about the various methods of discharging personnel.

Major, Contracting (Missile Operations Background)

Acquisition section is weak. Confuses acquisition of weapon systems with acquisition of personnel and information. Personnel support should be a separate process. The entire "combat support process" section tries to put the process in too neat of a package.

First Lieutenant, Engineer

In section 2-4 [Acquisition Process], it should be emphasized that the development of a new system is the last choice. If an old system will take care of an Air Force need, then it will be modified, because this is usually cheaper.

Major, Senior Flight Surgeon

We should stress to all [Air Force] members, especially physicians which are hospital bound, their role in the support of war time and peace time military. Many of the military physicians have no idea what combat medicine is or will be.

Junior Captain, Communications Program & Analysis Officer

I am a supporter of using doctrine to keep all AF members on the same "wavelength" - supporting national objectives/policies rather than [supporting] solely narrow organizational objectives. However, except for PME, I have NEVER seen doctrine encouraged or supported.

I recommend that the USAF develop an educational approach to doctrine, phasing in how each facet of the AF fits in. A film that shows the process and each aspect supporting the whole could accomplish this. The key is not to bore the viewers but to grab their spirit and educate them.

Major, Supply (Background in Logistics Plans & Programs)

The USAF must have a written, well publicized Logistics (Combat) Support Doctrine. However, this manual is too wordy.

Doctrine is a set of beliefs about something, not explanations or procedural summaries of courses of actions. The Combat Support Doctrine manual should be a number of terse, unqualified statements...a philosophy of military combat support, less explanatory and more mystical, and less prescriptive than this document.

One author would probably do better than a committee. A Sun Tzu or a Guderain will do better than a group of isolated school faculty or headquarters staff writing a doctrinal document. We could strive to say the same thing, or better, in half the number of pages.

First Lieutenant, Engineer

The document is very general. It is hard not to agree with everything stated. Statements like "...an objective of all commanders is to keep control of their forces" ...although true, it does little to inform. Anyone with common sense will gain little by reading this doctrine. Since I have not read any other doctrines, maybe they're all this way. Nonetheless, being so general it seems to have little value.

Major, Aircraft Maintenance

Chapter 2 should have used simpler words to convey their meaning more quickly. It [Chapter 2] can be viewed as a waste of resources; it was too long.

Otherwise I like the idea of having our doctrine written down. We need more doctrine in our training.

First Lieutenant, Nurse

Most medical officers have little or no training of the "real" AF and rely solely on SOS. More definitely needs to be done in the way of [informing] support groups for SOS.

Junior Captain, Public Affairs Officer

The manual's conciseness and clarity pleased me the most.

Major, Supply Officer

There is a basic problem with this doctrine in that the words used (such as Maturation, Friction, Balance, Restoration, Distribution, Preservation, etc.) are not defined clearly. The words are used in an untraditional sense. For example, distribution is really "deployment," preservation is really "maintenance," friction is really "things don't go as planned in war" (although the last one is better defined in the text than the others).

Junior Captain, Manpower

AFM 2-15 is a clear, concise reminder of where my efforts fit into the "big picture." Information like this is most effectively presented in small doses, as this is - good job!

Major, Acquisition Program Mgr (Navigator Background)

Manuals such as this provide the basis to discuss the principles of war...They should not be construed as references of required reading, but should be a basis for learning at Professional Military Schools where the lessons of the past can be woven into the scope of the doctrine...any other use of this material would be useless.

Major, Logistics Plan & Programs (Navigator Background)

[AFM 2-15] should be made mandatory reading for anyone coming from the cockpit to jobs in AFLC or AFSC program offices.

Senior Captain, Civil Engineer

Although it's not lengthy, I think it could be shortened considerably without losing effect. It is rather wordy and covers many common sense items that don't need explaining.

Major, Pilot (With Contracting Experience)

This is one of the most complete and well written documents I have had the pleasure to read. Considerable thought and organization are clearly evident in its structure. The book [manual] is succinct enough to read in a short time, yet comprehensive enough to completely cover the entire range of subjects that it proposes to cover in the introduction. I recommend all Air Force personnel read it.

Appendix C: SAS Computer Program

```
options linesize=78;
proc format;
  value seefmt 1='Prof Jrnl'
              2='PME'
              3='Work'
              4='Brf'
              5='No';
  value opinfmt 1='Str Disagree'
               2='Disagree'
               3='Neutral'
               4='Agree'
               5='Str Agree';
  value afitfmt 1='LOGM567 Student'
               2='Non-Student';
  value procfmt 1='Def Process'
               2='Acq Process'
               3='Mature Proc'
               4='Distr Process'
               5='Integrate Proc'
               6='Preserve Proc'
               7='Restore Proc'
               8='Disp Process'
               9='Combination';
  value usefmt 1='Not Useful'
              2='Slight Use'
              3='Useful'
              4='Very Useful';
  value afdocfmt 1='1-1'
                2='2-1'
                3='Other'
                4='None'
                5='Both';
  value deffmt 1='Statement'
              2='Officially Taught'
              3='Abstract Truth';
  value yesnofmt 1='Yes'
                2='No';
  value pmefmt 1='SOS'
              2='ACSC'
              3='AWC'
              4='SOS & ACSC'
              5='ACSC & AWC'
              6='SOS & AWC'
              7='ALL'
              8='None';
```

value edtypfmt 1='Engineering'
 2='Business'
 3='Social Science'
 4='Sci/Tech'
 5='Humanities'
 6='Other'
 7='Two Bach';
 value degrefmt 1='Bach'
 2='M/Non Log'
 3='M/Log AFIT'
 4='M/Log Other'
 5='Doct'
 6='Other'
 7='Two M. - Log & NonLog';
 value sexfmt 1='Female'
 2='Male';
 value agefmt 1='<24'
 2='25 - 30'
 3='31 - 35'
 4='36 - 40'
 5='>40';
 value commfmt 1='ROTC'
 2='OTS/OCS'
 3='USAFA'
 4='Other';
 value rankfmt 1='1Lt'
 2='Capt <8'
 3='Capt >8'
 4='Major' 5='2Lt';
 value priorfmt 1='No Prior'
 2='Yes, <4'
 3='Yes, >4';
 value aerofmt 1='Not Rated' 2='Pilot'
 3='Nav' 4='Other';
 value yearfmt 1='0-3' 2='4-7' 3='8-11' 4='12-15';
 value jobfmt 1='Sqdn' 2='Wing' 3='NAF'
 4='SOA' 5='MAJCOM'
 6='Air Staff' 7='Joint'
 8='Other' 9='Comb';
 value cmdfmt 1='Pred AFLC' 2='Pred AFSC'
 3='Only SpaceCom'
 4='Pred MAC' 5='Pred TAC' 6='Pred SAC'
 7='Pred ATC' 8='Pred PACAF'
 9='Pred USAFE' 10='Pred AFCC'
 11='Pred ESC' 12='Wide Range'
 13='Pred AFCC' 14='Pred AU';

```

value afscfmt 1='00XX' 2='09XX' 3='10XX' 4='14XX'
               5='15XX' 6='18XX' 7='20XX' 8='22XX'
               9='26XX' 10='27XX' 11='28XX' 12='31XX'
               13='40XX' 14='49XX' 15='55XX' 16='60XX'
               17='64XX' 18='65XX' 19='66XX' 20='67XX'
               21='70XX' 22='73XX'
               23='74XX' 24='79XX' 25='80XX'
               26='90XX' 27='91XX' 28='93XX'
               29='95XX' 30='96XX' 31='97XX'
               32='98XX' 33='12XX' 34='25XX'
               35='11XX' 36='81XX';
value scorefmt 1='Poor' 2='Bad' 3='Okay' 4='Good'
               5='Excellent';
value careefmt 1='Cmdr/Dir' 2='Ops' 3='Sci/Dev'
               4='Logistics' 5='Comm/Comp Sys' 6='CE'
               7='Acctg & Fin' 8='Personnel Res'
               9='PA' 10='Intell'
               11='Med Careers';

Data final;
infile final;
input see 1 easy 2 short 3 long 4 ambig 5 clear 6
      wordy 7 title 8 adequate 9 clarify 10 backgrnd 11
      interrel 12 everyone 13 importnt 14 cycle 15 ops 16
      system 17 trauma 18 process 19 brief 20 video 21 writ
      22 afdoc 23 define 24 hist 25 nopme 26 sosc 27 sosr
      28 acscc 29 acsccs 30 acscr 31 awccs 32 pmesum 33
      edtype 34 degree 35 sex 36 age 37 comm 38 rank 39
      prior 40 aero 41 afsc 42-43 othafsc 44 afsc two 45-46
      years 47 actual 48 simulate 49 cmd 50-51
      job 52 score 53 afit 54;
if 1<=afsc<=2 then carsum=1;
else if 3<=afsc<=8 then carsum=2;
else if 9<=afsc<=11 then carsum=3;
else if afsc=33 then carsum=2;
else if afsc=35 then carsum=2;
else if afsc=34 then carsum=3;
else if 12<=afsc<=13 then carsum=4;
else if afsc=14 then carsum=5;
else if afsc=15 then carsum=6;
else if 16<=afsc<=19 then carsum=4;
else if afsc=20 then carsum=7;
else if 21<=afsc<=23 then carsum=8;
else if afsc=24 then carsum=9;
else if afsc=25 then carsum=10;
else if 26<=afsc<=32 then carsum=11;
if 1<=see<=4 then seesum=1;
else if see=5 then seesum=2;

```

label see='Seen AFM 2-15 before'
 easy='AFM 2-15 is easy to understand'
 short='AFM 2-15 is too short'
 long='AFM 2-15 is too long'
 ambig='AFM 2-15 is ambiguous'
 clear='AFM 2-15 is clear & concise'
 wordy='AFM 2-15 is wordy'
 title='Title captures the essence of log funct'
 adequate='AFM 2-15 explains procs & relations'
 clarify='Doctrine clarifys my role & mission'
 backgrnd='Career bkgrnd helps me understand 2-15'
 interrel='Helps undrstnd rel btwn job & other func'
 everyone='All in AF should read 2-15'
 importnt='Doctrine is imp for undrstnding combat'
 cycle='Cycle score'
 ops='Ops score'
 system='System score'
 trauma='Trauma score'
 process='Process match'
 brief='Opinion of adding briefing'
 video='Opinion of adding video'
 writ='Opinion of adding written material'
 afdoc='Other AF doctrines read'
 define='Definition of doctrine'
 hist='History studied on own'
 nopme='Have not completed any PME'
 sosc='SOS by correspondance'
 sosr='SOS in residence'
 acscc='ACSC by correspondance'
 acscs='ACSC by corr/seminar'
 awccs='AWC by corr/seminar'
 pmesum='PME Summary'
 edtype='Type of undergrad degree'
 degree='Highest degree held'
 comm='Source of Commission'
 prior='Prior enlisted experience'
 aero='Aeronautical rating'
 afsc='Present AFSC'
 othafsc='How many have another AFSC'
 afsctwo='Other AFSCs held'
 years='Years of commissioned service'
 actual='Any actual wartime experience'
 simulate='Any simulated combat experience'
 cmd='MAJCOM experience'
 job='Job levels held'
 score='Understanding AFM 2-15 score'
 afit='LOGM 567 students'
 carsum='Career Summary'
 seesum='Seen AFM 2-15 Summary';

```

format  see seefmt. easy short long ambig clear wordy title
adequate clarify backgrnd interrel everyone importnt
opinfmt. cycle ops system trauma hist nopme sosc sosr
acscac acscacs acscr awccs othafsc actual simulate
seesum yesnofmt. process procfmt. brief video writ
usefmt. afdoc afdocfmt. define deffmt. pmesum pmefmt.
edtype edtypfmt. degree degrefmt. sex sexfmt.
age agefmt. comm commfmt. rank rankfmt. prior
priorfmt. aero aerofmt. afsc afsctwo afscfmt. years
yearfmt. cmd cmdfmt. job jobfmt. score scorefmt. afit
afitfmt. carsum careefmt.;

proc freq;
tables sex -- years;
tables carsum;
tables see -- importnt;
tables score;
tables score*seesum / chisq nocol norow;
tables brief -- hist;
tables everyone*pmesum /chisq nocol norow;
tables everyone*edtype / chisq nocol norow;
tables everyone*afdoc / chisq nocol norow;
tables everyone*define / chisq nocol norow;
tables everyone*hist / chisq nocol norow;
tables everyone*degree / chisq nocol norow;
tables everyone*sex / chisq nocol norow;
tables everyone*age / chisq nocol norow;
tables everyone*comm / chisq nocol norow;
tables everyone*rank / chisq nocol norow;
tables everyone*prior / chisq nocol norow;
tables everyone*aero / chisq nocol norow;
tables everyone*years/ chisq nocol norow;
tables carsum*everyone/ chisq nocol norow;
tables everyone*cmd / chisq nocol norow;
tables everyone*job / chisq nocol norow;
tables everyone*afit / chisq nocol norow;
tables actual -- simulate;

proc ttest;
class afit;
var score;

```


Appendix D: Results for Research Question Four

TABLE 38
Everyone By PME Summary

EVERYONE (All in AF should read 2-15)
PMESUM (PME Summary)

FREQUENCY	SOS ONLY	ACSC ONLY	SOS & ACSC	ALL	None	TOTAL
Str Disagree	4	0	2	1	2	9
Disagree	14	0	6	0	6	26
Neutral	18	0	10	4	5	37
Agree	43	1	19	3	13	79
Str Agree	12	0	15	1	3	31
TOTAL	91	1	52	9	29	182

CHI-SQUARE = 14.723 PROB VALUE = 0.545

TABLE 39

Table Of Everyone By Edtype

EVERYONE (All in AF should read 2-15)
EDTYPE (Type of undergraduate degree)

FREQUENCY	Engineer	Business	Social Sciences	Science /Tech	TOTAL
Str Disagree	4	0	1	3	9
Disagree	11	5	4	4	26
Neutral	15	7	1	6	37
Agree	24	18	9	14	79
Str Agree	8	9	1	6	31
TOTAL	62	39	16	33	182

Table Of Everyone By Edtype (CONTINUED)

EVERYONE (All in AF should read 2-15)
EDTYPE (Type of undergrad degree)

FREQUENCY	Humanities	Other Area	Two Bachelor	TOTAL
Str Disagree	0	0	1	9
Disagree	0	1	1	26
Neutral	3	2	3	37
Agree	4	8	2	79
Str Agree	1	4		31
TOTAL	8	15		182

CHI-SQUARE = 19.481 FREE VALUE

AD-A186 539

THE REACTIONS AND ATTITUDES DISPLAYED BY AIR FORCE
OFFICERS TO THE COMBAT (U) AIR FORCE INST OF TECH
WRIGHT-PATTERSON AFB OH SCHOOL OF SYST L K SMARIGA
SEP 87 AFIT/GLM/LSG/87S-69 F/G 5/8

2/2

UNCLASSIFIED

NL



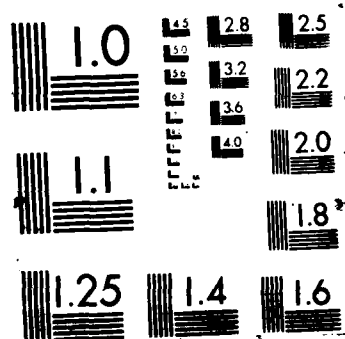


TABLE 40

Table Of Everyone By AFDOC

EVERYONE (All in AF should read 2-15)
AFDOC (Other AF doctrines read)

FREQUENCY	AFM 1-1	AFM 2-1	Other Doctrine	None	Both	TOTAL
Str Disagree	4	0	0	4	1	9
Disagree	10	0	1	11	4	26
Neutral	13	3	0	15	6	37
Agree	31	1	2	30	13	77
Str Agree	10	0	2	6	13	31
TOTAL	68	4	5	66	37	180

CHI-SQUARE = 22.620 PROB VALUE = 0.124

TABLE 41

Table Of Everyone By Define

EVERYONE (All in AF should read 2-15)
DEFINE (Select definition of doctrine)

FREQUENCY	Statement	Officially Taught	Abstract Truth	TOTAL
Str Disagree	5	1	3	9
Disagree	8	14	3	25
Neutral	13	13	11	37
Agree	28	29	21	78
Str Agree	5	17	9	31
TOTAL	59	74	47	180

CHI-SQUARE = 12.092 PROB VALUE = 0.147

TABLE 42
Table Of Everyone By History

EVERYONE (All in AF should read 2-15) HISTORY (History studied on own)			
FREQUENCY	Yes	No	TOTAL
Str Disagree	4	5	9
Disagree	11	15	26
Neutral	20	17	37
Agree	41	37	78
Str Agree	22	9	31
TOTAL	98	83	181
CHI-SQUARE = 5.421 PROB VALUE = 0.247			

TABLE 43
Table Of Everyone By Degree

EVERYONE (All in AF should read 2-15) DEGREE (Highest degree held)							
FREQUENCY	Bachelor Only	M/Non : Log	M/Log AFIT	M/Log Other	Phd / MD	Two Masters	TOTAL
Str Disagree	7	2	0	0	0	0	9
Disagree	11	12	0	0	3	0	26
Neutral	21	15	0	0	1	0	37
Agree	41	29	4	3	2	0	79
Str Agree	19	7	4	0	0	1	31
TOTAL	99	65	8	3	6	1	182
CHI-SQUARE = 29.003 PROB VALUE = 0.088							

TABLE 44

Table Of Everyone By Sex

EVERYONE (All in AF should read 2-15)			
SEX (F or M)			
FREQUENCY	Female	Male	TOTAL
Str Disagree	0	9	9
Disagree	3	23	26
Neutral	3	34	37
Agree	11	68	79
Str Agree	3	28	31
TOTAL	20	162	182

CHI-SQUARE = 2.183 PROB VALUE = 0.702

TABLE 45

Table Of Everyone By Age

EVERYONE (All in AF should read 2-15)						AGE
FREQUENCY	<24	25 - 30	31 - 35	36 - 40	>40	TOTAL
Str Disagree	1	4	2	1	1	9
Disagree	1	13	9	3	0	26
Neutral	0	14	7	13	3	37
Agree	3	28	23	20	5	79
Str Agree	0	5	13	10	3	31
TOTAL	5	64	54	47	12	182

CHI-SQUARE = 20.248 PROB VALUE = 0.209

TABLE 46

Table Of Everyone By Commission

EVERYONE (All in AF should read 2-15)

COMMISSION (Source of Commission)

FREQUENCY	ROTC	OTS/OCS	USAFA	Other	TOTAL
Str Disagree	3	4	2	0	9
Disagree	9	8	5	4	26
Neutral	16	16	4	1	37
Agree	36	29	8	6	79
Str Agree	13	16	0	2	31
TOTAL	77	73	19	13	182

CHI-SQUARE = 13.241 PROB VALUE = 0.352

TABLE 47

Table Of Everyone By Rank

EVERYONE (All in AF should read 2-15)

RANK (Of each respondent)

FREQUENCY	1Lt	Capt <8	Capt >8	Major	2Lt	TOTAL
Str Disagree	3	3	2	1	0	9
Disagree	7	8	8	3	0	26
Neutral	7	13	8	9	0	37
Agree	20	26	18	14	1	79
Str Agree	7	6	10	8	0	31
TOTAL	44	56	46	35	1	182

CHI-SQUARE = 7.603 PROB VALUE = 0.960

TABLE 48

Table of Everyone By Prior

EVERYONE (All in AF should read 2-15)				
PRIOR (Prior enlisted experience)				
FREQUENCY				
		No Prior	Yes, <4	Yes, >4
Str Disagree		7	1	1
Disagree		19	4	3
Neutral		26	5	6
Agree		58	9	12
Str Agree		18	2	11
TOTAL		128	21	33

CHI-SQUARE = 8.493 PROB VALUE = 0.387

TABLE 49

Table of Everyone By Aero

EVERYONE (All in AF should read 2-15)
AERO (Aeronautical rating)

FREQUENCY	Not Rated	Pilot	Nav	Other	TOTAL
Str Disagree	7	1	1	0	9
Disagree	23	2	1	0	26
Neutral	28	2	7	0	37
Agree	65	5	8	1	79
Str Agree	24	1	6	0	31
TOTAL	147	11	23	1	182

CHI-SQUARE = 6.894 PROB VALUE = 0.865

TABLE 50

Table of Everyone By Years

EVERYONE (All in AF should read 2-15)
YEARS (Years of commissioned service)

FREQUENCY		0-3		4-7		8-11		12-15		TOTAL
Str Disagree		3		3		1		2		9
Disagree		6		10		9		1		26
Neutral		6		14		5		12		37
Agree		21		26		18		14		79
Str Agree		6		8		7		10		31
TOTAL		42		61		40		39		182

CHI-SQUARE = 14.381

PROB VALUE = 0.277

TABLE 51

Table of Carsum By Everyone

CARSUM (Career Summary)						
EVERYONE (All in AF should read 2-15)						
FREQUENCY	Str Disagree	Disagree	Neutral	Agree	Str Agree	TOTAL
-----+	-----+	-----+	-----+	-----+	-----+	
Cmdr/Dir	1	0	0	0	1	2
-----+	-----+	-----+	-----+	-----+	-----+	
Operations	0	0	4	6	1	11
-----+	-----+	-----+	-----+	-----+	-----+	
Science/ Development	6	14	15	24	9	68
-----+	-----+	-----+	-----+	-----+	-----+	
Logistics	2	3	10	23	14	52
-----+	-----+	-----+	-----+	-----+	-----+	
Comm/ Comp System	0	1	2	7	0	10
-----+	-----+	-----+	-----+	-----+	-----+	
Civil Eng	0	2	0	1	0	3
-----+	-----+	-----+	-----+	-----+	-----+	
Acctg & Finance	0	2	2	3	1	8
-----+	-----+	-----+	-----+	-----+	-----+	
Personnel Resources	0	0	2	5	1	8
-----+	-----+	-----+	-----+	-----+	-----+	
Public Aff	0	0	0	0	1	1
-----+	-----+	-----+	-----+	-----+	-----+	
Intelligence	0	0	0	2	0	2
-----+	-----+	-----+	-----+	-----+	-----+	
Med Careers	0	4	1	6	2	13
-----+	-----+	-----+	-----+	-----+	-----+	
TOTAL	9	26	36	77	30	178

CHI-SQUARE = 52.616

PROB VALUE = 0.087

TABLE 52

Table of Everyone By Command

EVERYONE (All in AF should read 2-15)							
COMMAND (Predominant MAJCOM experience)							
FREQUENCY	Pred AFLC	Pred AFSC	Pred MAC	Pred TAC	Pred SAC	Pred ATC	TOTAL
Str Disagree	0	4	1	2	1	0	9
Disagree	2	13	2	0	1	1	26
Neutral	2	13	2	0	5	1	36
Agree	7	27	4	2	12	2	79
Str Agree	1	1	6	4	5	0	31
TOTAL	12	58	15	8	24	4	181

Table of Everyone By Command (CONTINUED)

EVERYONE (All in AF should read 2-15)						
COMMAND (Predominant MAJCOM experience)						
FREQUENCY	Pred PACAF	Pred USAFE	Wide Range	Pred AFCC	Pred AU	TOTAL
Str Disagree	0	0	1	0	0	9
Disagree	0	1	5	0	1	26
Neutral	0	0	11	2	0	36
Agree	0	1	22	2	0	79
Str Agree	1	2	10	0	1	31
TOTAL	1	4	49	4	2	181

CHI-SQUARE = 56.208 PROB VALUE = 0.046

TABLE 53

Table of Everyone By Job

EVERYONE (All in AF should read 2-15)					
JOB (Job levels held)					
FREQUENCY	Sqdn	Wing	NAF	SOA	TOTAL
Str Disagree	1	0	1	0	9
Disagree	8	1	4	1	22
Neutral	6	1	1	1	34
Agree	8	2	6	0	72
Str Agree	6	0	0	0	30
TOTAL	29	4	12	2	167

Table of Everyone By Job (CONTINUED)

EVERYONE (All in AF should read 2-15)					
JOB (Job levels held)					
FREQUENCY	Air Staff	Joint	Other	Combination	TOTAL
Str Disagree	0	0	1	6	9
Disagree	0	0	2	6	22
Neutral	0	0	1	24	34
Agree	0	1	14	41	72
Str Agree	1	0	2	21	30
TOTAL	1	1	20	98	167

CHI-SQUARE = 36.981

PROB VALUE = 0.119

TABLE 54

Table of Everyone By AFIT

EVERYONE (All in AF should read 2-15)
AFIT (LOGM 567 students & non-students)

FREQUENCY	LOGM567 Student	Non- Student	TOTAL
Str Disagree	1	8	9
Disagree	3	23	26
Neutral	5	32	37
Agree	15	64	79
Str Agree	10	21	31
TOTAL	34	148	182

CHI-SQUARE = 5.630 PROB VALUE = 0.229

Bibliography

1. Arnold, Capt George, Assistant Professor of Aerospace Studies. Telephone interview. Air Force ROTC Detachment 207, Parks College, Cahokia IL, 25 June 1987.
2. Badalamente, LtCol Richard V. "The Air Force Reexamines Its Logistics Doctrine," Logistics Spectrum, 15: 32-35 (Spring 1981).
3. Birschback, Capt Dan, Defense Studies Curriculum Area Manager. Telephone interview. Officer Training School/MTCA, Lackland AFB TX, 29 June 1987.
4. Campbell, Capt John E., Aerospace Curriculum Manager. Telephone interview. Squadron Officer School/EDCD, Maxwell AFB AL, 4 March 1987.
5. Conover, W.J. Practical Nonparametric Statistics. New York: John Wiley & Sons Incorporated, 1971.
6. Department of the Air Force. Guide for the Development of the Attitude and Opinion Survey. Washington: HQ USAF/ACM, October 1974.
7. Dieckmann, Maj Jennifer, Logistics Doctrine Manager. Telephone interview. Air University Center for Aerospace Doctrine, Research and Education/RID, Maxwell AFB AL, 3 March 1987.
8. Dominowski, Roger L. Research Methods. Englewood Cliffs NJ: Prentice-Hall, Incorporated, 1980.
9. Ehrhart, Lt Col Robert C. "Ideas and the Warrior," Air University Review, 37: 103-107 (September-October 1986).
10. Fuchs, Capt Ron. "Battling Back to the Basics," Airman, 27: 14-19 (April 1983).
11. -----, "From Chariots to Starships," Airman, 24: 41-43 (August 1985).
12. Gorby, Maj James D. "Air Force Logistics Doctrine," Air Force Journal of Logistics, 4: 24-30 (Winter 1980).
13. Grumbles, LtCol John, Chief, Military Strategy and Doctrine Branch. Telephone interview. Air Command and Staff College/EDH, Maxwell AFB AL, 4 March 1987.

14. Handy, Capt Gurnie H., and Capt Ronald L. McCool. "Air Force Combat Logistics: An Education Plan," Air Force Journal of Logistics, 9: 10-13 (Fall 1985).
15. Holley, Maj General I.B., Jr., USAFR (Ret), PhD. "Concepts, Doctrines, Principles: Are You Sure You Understand These Terms?" Air University Review, 25: 90-93 (July/August 1984).
16. ----- "The Role of Doctrine," Air Force Journal of Logistics, 10: 9 (Winter 1986).
17. Luvaas, Jay. "Some Vagrant Thoughts on Doctrine," Military Review, 66: 56-60 (March 1986).
18. Marquez, Lt General Leo. "The Logistic Warrior," Air Force Journal of Logistics, 10: 9-11 (Spring 1986).
19. Martin, Maj Jerome V., Chief, Military Studies Division. Telephone interview. USAFA/CWIS CO, 23 July 1987.
20. McDaniel, LtCol William T., Jr. "Combat Support Doctrine: Coming Down to Earth," Draft essay, Second Award Winner of the 1986 Ira C. Eaker Essay Competition, Air University Review.
21. ----- "Institutionalizing Logistics Doctrine," Air Force Journal of Logistics, 10: 37 (Summer 1986).
22. ----- "The Doctrinal Challenge: A Rebirth of Logistics Thought," Air Force Journal of Logistics, 10: 10-14 (Winter 1986).
23. -----, Chief, Advanced Logistics Concepts/Doctrine. Telephone interview. HQ USAF, Washington DC, 25 February 1987.
24. McMahon, LtCol Gary C. Air Force Logistics Doctrine: Where Is It? Research report. Air War College, Maxwell AFB AL, May 1985.
25. Murray, Maj Williamson, USAFR, PhD. "A Tale of Two Doctrines," Journal of Strategic Studies, (September 1983).
26. Tilford, Maj Earl H., Jr. "Know History...Or Become History," Air University Review, 28: 14-15 (November/December 1986).
27. Siegel, Sidney. Nonparametric Statistics for the Behavioral Sciences. New York: McGraw-Hill Book Company, 1956.

VITA

Captain Linda K. Smariga was born on 30 May 1961 in Aurora, Colorado. She graduated from high school in Houston, Texas, in 1978 and attended Baylor University, from which she received the degree of Bachelor of Arts in Psychology in May 1982. Upon graduation, she received a commission in the USAF through the Air Force ROTC program. Upon entering active duty in November 1982, she attended the Aircraft Maintenance Officers Course at Chanute AFB, Illinois. She graduated in April 1983 and was assigned to the 4950th Test Wing at Wright-Patterson AFB, Ohio. She served as an aircraft maintenance officer in a variety of positions, the last of which was Maintenance Supervisor, Avionics Maintenance Squadron. In May 1986 she entered the School of Systems and Logistics, Air Force Institute of Technology.

Permanent address: 12103 Kirkbriar Dr.

Houston, Texas 77089

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE

A186 537

REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

1a. REPORT SECURITY CLASSIFICATION UNCLASSIFIED			1b. RESTRICTIVE MARKINGS	
2a. SECURITY CLASSIFICATION AUTHORITY			3. DISTRIBUTION/AVAILABILITY OF REPORT Approved for public release; distribution unlimited.	
2b. DECLASSIFICATION/DOWNGRADING SCHEDULE			5. MONITORING ORGANIZATION REPORT NUMBER(S)	
4. PERFORMING ORGANIZATION REPORT NUMBER(S) AFIT/GLM/LSG/87S - 69			7a. NAME OF MONITORING ORGANIZATION	
6a. NAME OF PERFORMING ORGANIZATION School of Systems and Logistics		6b. OFFICE SYMBOL (If applicable) AFIT/LSM	7b. ADDRESS (City, State, and ZIP Code)	
6c. ADDRESS (City, State, and ZIP Code) Air Force Institute of Technology Wright-Patterson AFB OH 45433-6583			9. PROCUREMENT INSTRUMENT IDENTIFICATION NUMBER	
8a. NAME OF FUNDING/SPONSORING ORGANIZATION Logistics Concepts Division		8b. OFFICE SYMBOL (If applicable) HQ USAF/LEXY	10. SOURCE OF FUNDING NUMBERS	
8c. ADDRESS (City, State, and ZIP Code) Pentagon Washington, DC 20330			PROGRAM ELEMENT NO	PROJECT NO
			TASK NO	WORK UNIT ACCESSION NO
11. TITLE (Include Security Classification) See Box 19				
12. PERSONAL AUTHOR(S) Linda K. Smariga, B. A., Capt, USAF				
13a. TYPE OF REPORT MS Thesis		13b. TIME COVERED FROM _____ TO _____	14. DATE OF REPORT (Year, Month, Day) 1987 September	15. PAGE COUNT 111
16. SUPPLEMENTARY NOTATION				
17. COSATI CODES			18. SUBJECT TERMS (Continue on reverse if necessary and identify by block number)	
FIELD	GROUP	SUB-GROUP		
05	04		AFM 2-15, AFM 1-10, Combat Support Doctrine, Doctrine	
19. ABSTRACT (Continue on reverse if necessary and identify by block number)				
<p>Title: THE REACTIONS AND ATTITUDES DISPLAYED BY AIR FORCE OFFICERS TO THE COMBAT SUPPORT DOCTRINE</p> <p>Thesis Chairman: Frederick W. Westfall, Lt Colonel, USAF Assistant Professor of Logistics Management</p>				
<p>Approved for public release: LSW AFB 107 / Lyn E. WOLVER 24 Sept 87 Dean for Research and Professional Development Air Force Institute of Technology (AFIT) Wright-Patterson AFB OH 45433</p>				
20. DISTRIBUTION/AVAILABILITY OF ABSTRACT <input checked="" type="checkbox"/> UNCLASSIFIED/UNLIMITED <input type="checkbox"/> SAME AS RPT <input type="checkbox"/> DTIC USERS			21. ABSTRACT SECURITY CLASSIFICATION UNCLASSIFIED	
22a. NAME OF RESPONSIBLE INDIVIDUAL Frederick W. Westfall, Lt Col, USAF			22b. TELEPHONE (Include Area Code) (513) 255-5435	22c. OFFICE SYMBOL AFIT/LSG

Block 19

The purpose of this study was to determine a group of officers, reactions and attitudes towards AFM 2-15, the Combat Support Doctrine. Specifically, the study attempted to find if (1) The Combat Support Doctrine was understandable and meaningful to these officers; and to determine (2) If the doctrine was not understandable and meaningful to these same officers, was the problem the actual doctrine itself, or was the problem related more to the institution; the Air Force. That is, was the problem related more to the fact that the Air Force does not emphasize the study of doctrine.

The data was collected by a survey developed for this study. The research found that the Combat Support Doctrine was understandable to these officers, but that it was not equally as meaningful to these same officers. There was no conclusive evidence that the doctrine itself was at fault, but the research did show that the Air Force does not emphasize the study of doctrine on a regular basis. Doctrine is only presented, usually in a brief format, at commissioning schools, and more in depth at professional military education schools, in residence.

END

DATE

FILM

JAN
1988